The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1844.—Vol. XL. LONDON, SATURDAY, DECEMBER 24, 1870. (WITH SUPPLEMENT) {PRICE ..... FIVEPENCE. PER ANNUM, BY POST, £1 4s.

BICKFORD'S PATENT FOR CONVEYING CHARGE IN SAFETY FUSE, FIRE TO THE BLASTING ROCKS, &c.

Obtained toe PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; and at the "GREAT INDUSTRIAL EXHIBITION," at Altona, in 1869.

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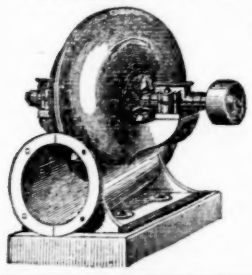

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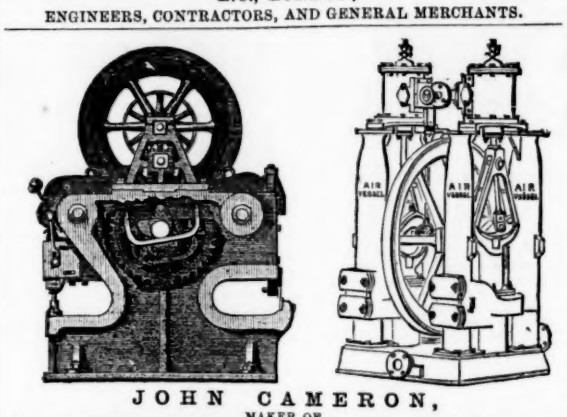

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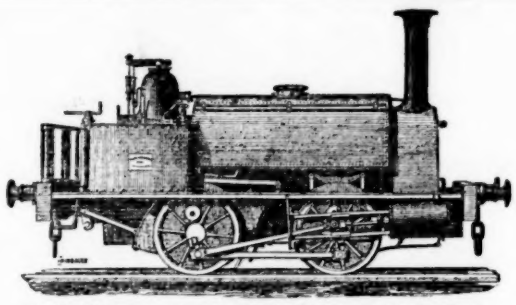

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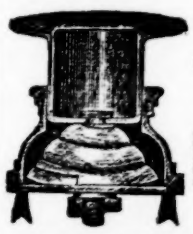

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PROSPECTUS.

This company is formed for the purpose of working an extensive property in the Stewartry of Kirkcudbright, in the South of Scotland. The property comprises many square miles of ground, and is secured from the several landowners on leases of 21 years, at a royalty of 1-15th, with the exception of one small sett, which is held at 1-12th.

It has been worked for nearly two years under tack-notes by a few gentlemen privately, who, after proving the existence of large mineral veins in all directions through the different setts, recently purchased the Creetown, Lachantyre, and Dallash Mines, with the machinery, buildings, &c., belonging thereto, with the intention of forming the whole into one company, and inviting the co-operation of those of their friends who are interested in mining, which is now done with the greatest confidence, the value of the property being beyond doubt.

The capital expended in the purchase of the mines and machinery, and working cost up to this date, has been provided for by the issue of 1200 paid-up shares to the present proprietors, who will also subscribe for a portion of the 1200 additional shares proposed to be issued for the further development of the property.

The report of Mr. John Taylor, jun., of Queen-street-place, London, dated 4th May, 1869, is annexed. It will be observed that his inspection of the property took place prior to the purchase of the Creetown, Lachantyre, and Dallish Mines

The report of Capt. Remfrey, one of Messrs. John Taylor and Sons' agents, is also appended, and particular attention is directed to his remarks regarding the extent of the property, the machinery erected, the work already done, with the discoveries made, and character and value of the ore.

The Portpatrick Railway passes through the centre of the property, and the ports of Creetown and Gatehouse are within easy distance.

A copy of the Memorandum of Association of the company is annexed.

Copies of the Memorandum and Articles of Association may be obtained at the office of the company, and application for shares may be made on the form enclosed with the prospectus, and accompanied by a deposit of £1 per share.

REPORTS.

Sandlycroft, Chester, May 4.—I beg to hand you my report upon your mining property in Scotland, which I visited last week. The sett, which is a very extensive one, being nearly 5 miles in length and 3½ in width, is situated close to the town of Creetown, in Kirkcudbrightshire, bounded to the west by the Old Cairnsmore Mines, and to the south-east by the Creetown Mine. A number of fine masterly lodes are to be seen at the surface at different points, and several of these can be traced for hundreds of fathoms in length through the sett. These lodes are of two different kinds, some running to the north of west and and south of east, but at different angles; and others running to the east of north and west of south. Nearly all the lodes at present discovered are marked and numbered upon the Ordnance Map shown to me by Capt. Hawke; those running north of west and south of east being coloured blue, and the caunter lodes red. About £600 has been expended in trials of a superficial nature at various points on the property. These trials, as far as they have been carried, are very satisfactory, and give considerable promise of future successes. Referring to the lodes marked blue on the map, Nos. 1, 2, and 3 can be traced for a long distance on the summit of Culcronchie hill, running parallel to one another at a distance of 5 to 10 fms. apart. At the foot of the hill in Culcronchie burn they are very plainly to be seen, and here an opening has been made and a level driven about 6 fms. south-east upon the middle or No. 2 vein. In the forebreast of this level the lode is from 4½ to 5 ft. wide, with the walls very clearly defined, underlying about 2 ft. in a fathom to the north-east; and although still so near the surface (the ground rising very gradually above) has already changed in character, and has a very kindly appearance, being composed of quartz with spots of lead ore, and in one portion traces of yellow copper ore. The No. 1 lode is, however, the most promising of these lodes (1, 2, and 3) as seen at the surface, being some 10 ft. wide; but for several reasons it will be advisable to drive upon the No. 2 lode (say) for a distance of 15 or 20 fms, and then put out cross-cuts to the No. 1 and No. 3 lodes. Within a few fathoms of these lodes to the westward, close together in the burn, may be seen the outcrop of the No. 4 lode about 6 feet wide, the No. 5 lode 4 ft. wide, and the No. 6 lode 10 ft. wide. Upon these no trial has been made, as they will be intersected at a considerable depth by the cross-cut driven on the course of the No. 2 caunter lode, to be mentioned hereafter. A short distance from the burn, near this spot, is the outcrop of the No. 7, or spring-water lode, some 50 ft. wide, open and kindly-looking, and from which are bubbling numbers of small springs of water strongly impregnated with oxide of iron. Still further westward a few fathoms we come to the No. 8 lode. Upon this a level has been driven south-east from the burn 5 fms.; the lode is from 4 to 5 ft. wide, very promising looking, and in the forebreast of the level already producing small stones of lead ore. An improvement may be expected very soon at this point. This No. 8 at its outcrop in the burn—where first discovered—is composed of quartz, interspersed throughout with small spots of copper. Close to the mouth of the level it is thrown some 3 fms. to the south-east by a cross-course running at right angles to it. From 70 to 80 fms. to the west of the level, upon No. 8 lode, a cross-cut is in course of driving in a northerly direction towards the No. 2 caunter lode; when this is reached it is proposed to carry forward the cross-cut upon the course of this north-east and south-west lode, and thus intersect all the eight lodes above mentioned, and any others that may not have been discovered at the surface. A considerable distance to the south-west of this cross cut down the burn openings have been made upon the No. 2 caunter lode, with the object of commencing another level; this should be a very fine trial level, intersecting as it would all the parallel lodes to the north-east of this point at 26 fms. under the cross-cut mentioned above, and unwatering them to a depth of no less than 105 fms. below the summit of Culchronchie Hill, upon which the outcrop of many of the lodes may be seen. The No. 10, or Creetown main, lode has not as yet been seen in your sett, but at only a short distance from the boundary to the south-east. It has been opened upon lately in three or four places, with great success, by the Creetown Mining Company. At the point nearest your boundary at which it has been touched a level has been driven little more than 4 fms. into the hill side, and in the forebreast is to be seen a fine lode, 6 ft. wide, of a very promising nature, with a course of lead ore going down in the bottom of the level worth from 1¼ to 1½ ton to a fathom. The Creetown Mine has been worked for some 10 or 12 years, and some thousands of pounds worth of lead and copper ores raised. Lodes No. 11 and No. 12, as laid down upon the plan, represent the supposed direction through the sett of the Black Craig and Old Cairnsmore lodes. Nothing has been done as yet actually to prove that these lodes do traverse your property, but there is every reason to believe that such is the case, and pits have been sunk near the plantations to the south-east of Cairnsmore House upon their supposed course, and in each pit although the lodes were not seen yet the indications lead me to think that they are at no great distance. The depth of soil is considerable, and for other reasons these trials have been abandoned for the present. The Blackcraig lode is a very large one, being some 40 ft. wide, and large quantities of ore have been raised at this mine during the many years it has been worked; and a fine discovery has only now lately been made in the bottom of the old mine, thus proving the important fact that the lodes in this district are productive at a considerable depth from the surface. At the Cairnsmore Mine, also, the returns of ore were some 60 tons per month, and a fine course of ore was worked in the 110 fm. level; the lode is about 12 ft. wide. The No. 13 lode is to be seen in a cutting upon the railway, close to Culcronchie Bridge. It is a wide, open-looking vein, but at this point much disordered. A small lode, No. 14, parallel to this, was discovered under the bridge in the Burn. We now come to No. 15 lode, the only one upon which a shaft has been sunk in this large sett. The depth at present attained is only 16 ft. from the surface, and the lode here is 5 to 6 ft. wide, composed principally of quartz, and carrying a rib of rich lead ore, nearly solid, from 3½ to 4 in. wide, and some 2 ft. of the lode besides, full of strong spots of ore, worth in one end of the shaft fully 15 cwts. of ore per fathom. The shaft is sunk within 25 fms. of the boundary, and close to the burn, so that it would not be advisable to continue it down as permanent work; but for a trial, with the great promise of improvement that it now presents, it is very important that an effort should be made to sink the shaft, at all events, a few fathoms deeper. This lode, as seen in the burn, a few fathoms to the south-east of the shaft, is 13 or 14 ft. wide, but it is here much disordered, and is not, in my opinion, so promising in appearance as several of the other lodes as seen at the surface. The lode has been proved at two points to the south-east side of the burn, and therefore out of your sett. An effort has also been made to find the lode some hundreds of fathoms to the north-west of the shaft, but the great depth of soil and the influx of surface water rendered this a matter of considerable difficulty during the winter, and the trial was, therefore, abandoned; should, however, the No. 15 lode open out well in the shaft it would certainly be advisable to continue this. The Nos. 16 and 17 lodes have been opened up to a small extent in the adjoining sett to the south-east of your property; so far as they are at present seen both lodes are much disordered, but are fine strong veins, and spotted throughout with mundic, copper, and lead ore. No. 18 lode is also large and promising looking, as seen in the burn; it is from 20 to 30 ft. wide, composed mainly of quartz, interspersed with mundic and small spots of copper. To the south-west of this lode about 60 fms. a level has been driven nearly 20 fms. in a north-easterly direction from the burn, to intersect the No. 18 and parallel lodes. This level will prove all this portion of the sett in a most thorough manner; and, from the number of lodes and strings to be seen in the burn, there is every reason to hope it may lead to valuable discoveries. A very large lode indeed is to be seen in the side of the burn, about ¼ mile from Creetown. A winze has been sunk about 4 fms. upon it, and, although this winze was full of water, I could see from the appearance of the stuff broken there that the lode is a very kindly one, and well worthy of further exploration. Of the lodes marked red on the map, the only one that I saw that appears to be promising is the No. 6; it is 10 to 12 ft. wide, as seen in the side of the hill in the granite, and interspersed throughout with spots of yellow copper ore. Having, I believe, mentioned all the points of note on the property, I will conclude by saying that I consider it to present great promise of success, and with vigorous working at certain points I shall be very much surprised if in the course of a very few months discoveries of value are not made. I would remark that the points I think most important are the driving on the No. 2 lode; this will be an excellent trial of the lodes Nos. 1, 2, and 3. The cross-cut towards the No. 2 caunter lode, to intersect so many of the lodes at right angles; also the cross-cut from the burn below the high road, towards the No. 18 and parallel lodes; and last, but no least, the shaft on the No. 15 lode. I should recommend you by all means to endeavour to get this shaft down, at all events, a few fathoms, to prove the lode, as it appeared to me that the rib of lead ore was becoming stronger as it went down, and was of more value quite in the bottom of the shaft that it was 2 ft. above that point. These trials it would be well to carry on during the next few months with some vigour, as such operations near the surface can be much more advantageously worked during the summer months than in winter. —— JOHN TAYLOR, Jun.

Derwent Mines, Riding Mill, Northumberland, June 30, 1870.—Acting upon Mr. John Taylor's instructions, I carefully examined your extensive mineral property, situated near Creetown, Kirkcudbright. The veins are large and numerous, traversing the trap formation and portions of argillaceous schist, which is more or less associated with the veins.—Champion Mine: The deep adit level cross-cut, driving north towards No. 18 vein, was taken up at the Chain burn, and driven upon a cross vein about 32 fathoms, which had influenced the main vein—so much so, that a part of the vein can be traced on the east side of the level for 2 or 3 fathoms back from the present end, which consists of quartz, spar, spots of mundic, blende, and lead ore, of no market value; a few fathoms will very probably intersect the principal part of the vein. There are eighteen known veins to the north of this level within 2½ miles. The out-crop of this vein where seen crossing the burn is very wide, composed principally of quartz, spar, mundic, &c. The level continued would drain the above veins and high backs. No. 17 vein is also large, containing strong branches of quartz and spar. The most encouraging part is that about 3 feet wide, containing small specimens of nickel, having on the south wall greenstone, and clay-slate partially decomposed on the north.—No. 15: The bearing of this vein is about the same direction as Nos. 18 and 17, being 35° south of east and north of west. The engine-shaft is sunk 10 fathoms upon the vein, capable of receiving large pitwork. At present the water is drained by means of a small water-wheel; should it be found necessary, a larger wheel, 50 or 60 feet diameter, could be put up—say 200 to 300 fathoms down the burn. The present machinery will likely enable you to go down 10 or more fathoms deeper. The 10 fm. level has been driven north upon the course of the vein about 9 fathoms, which produced excellent lead ore, and the present end is promising, yielding nice pieces of ore, with small strings or branches containing spar and spots of lead ore. About midway between this and the shaft, I observed a good profitable vein in the roof of level, and I was told the vein was very productive in the sole. The 10 fm. level has been driven some 4 or 5 fms. south of shaft. The vein here does not present such favourable indications, although it is strong. Ground is being cut for plat and cistern to take up the top water, and hopes are entertained of sinking the shaft without the assistance of pumps. A few fathoms south of shaft, an open cutting 24 fms. in length has been made, and a cross level driven some 9 feet to the vein. Here a winze is sunk, now full of water, 11 feet. The vein I was told is 4 or 5 feet big, composed of quartz, spar, blende, stones of lead, and a little copper ore, samples of which I examined at the surface. About 125 fathoms south this vein is intersected by an east and west vein, hading north towards No. 15 vein. The back of this vein has been laid open for a few fathoms; it is wide, and composed of quartz, spar, and occasional spots of mundic. At this mine I took a sample of dressed ore from a small parcel lying on the dressing-floor, which gave by assay 77 per cent. of lead and 2 ozs. 17 dwts. 4 grs. of silver per ton of pig lead. Nos. 1, 2, and 3 veins have nearly the same bearing, being 36° south of east. No. 1 is a strong vein, showing good spots of lead ore when seen in the burn; between this and No. 2 vein there is a portion of schist, and, I may add, elvan. A day level is driven a short distance east upon this vein composed principally of clay-slate. In all probability the main part is standing to the north. No. 3 shows spots of copper ore at the out-crop on the moor, not far from the burn. The junction of the three veins is said to be east of this point. Nos. 4, 5, and 6 have been proved only by making trenches on the backs of these veins, in which I was told copper, lead, and blende were found in small quantities, but not of commercial value. These pits are now full of water and stuff, so that I could not examine them forming their intersections at the point of junction with the clay-slate and granite, at Culcronchie Hill to the east; No. 4 is 6 feet wide, No. 5 4 feet, and No. 6 vein 10 feet wide. I noticed the out-crop of veins in Calchronchie burn. No. 7, or spring water vein—which may also be termed the monster vein—is said to be 50 ft. wide. It can be seen in places north of the burn, on the Cuill estate, where the water is gushing out at several points strongly charged with the oxide of iron.—No. 8: The end of the level upon this vein stands 25 fathoms east of burn. Open cutting 10 fathoms, driven 15 fathoms, good samples of lead and copper, mixed with blende; also the carbonate of lead and copper, lying at surface, near to the entrance of the level, which must be regarded as being very promising looking vein stuff. The vein here is strong and masterly, notwithstanding it has been influenced by a caunter vein, and heaved some 3½ fathoms to the west. This working is 30 fathoms east of trial shaft, which is sunk from surface 5 fathoms, now partly filled with water. I was informed that the vein is 5½ feet wide at that depth, and judging from the fine pieces of copper ore (yellow, of high percentage) lying at surface, the vein must be a hopeful one, and sufficient to warrant further explorations in depth. The water has hitherto been drawn in buckets. A 10-feet water-wheel is now being erected, which I fear will be found inadequate to prove the veins to any great depth. About 60 fms. west of shaft, at about the same level at random, a day adit cross-cut has been driven 20 fathom north towards this vein (No. 8), and there are about 12 fms. to drive to intersect it; this should be done. This cross-cut was intended to cut No. 2 copper vein, and then to drive on its course to intersect all the other lead veins. In doing this high backs would be attained.—The Deep Adit Level Cross-Cut: Here an open cutting has been brought up for about 12 fms. long, and the level extended from it about 3 fathoms towards No. 2 vein; by driving upon this vein would cut the same veins as the above cross-cut, but come up 26 fathoms below it, and about the same at the engine-shaft. If continued as far as 1, 2, and 3, 45 fathoms, and under the summit of Culcronchie Hill, about 105 fathoms cover would be got. This is a very important trial, and should be carried forward with vigour. There are convenient places for reservoirs and for dressing-floors at those cross-cuts, or day levels.—Dallash: This mine is situated about 5 miles north-east of the Champion Mines, in the slope of a high mountain, and where considerable cover, or backs, can be got by taking up an adit level upon the line of the vein—still, nothing of this mode of mining could have been entertained by the former company. A whim-shaft has been sunk a few fathoms above the base of the mountain, 20 fathoms, and a 10 fm. level driven 6 fathoms north of shaft, and about 3 fathoms south; the bottom, or 20 fm. level is driven north 8 or 9 fathoms, and south about 1½ fathoms. Those places, I was told, produced good pieces of lead ore, and which I saw lying at the surface. The vein which now forms the bed of the burn for some distance is 8 or 9 feet wide, and it has been washed away for a considerable distance of length by the water to a depth of from 15 to 20 feet in one place, leaving both walls of the vein quite perfect to surface. Here the vein does not present very great promise; the vein stuff on the hillocks and about the shaft top has a much better appearance, and judging from this, more especially, a further and more substantial trial should be made. In passing through Blackcraig and Cairnsmore Mines, I noticed that the vein stuff differs in appearance. I am of opinion that the Blackcraig Mine has not been operated upon at Cairnsmore, that is, judging partly from the workings, unless a most rapid bend has taken place, or the vein moved from its regular course by a cross vein of some considerable power, which I think is not very likely. Those mines I believe have yielded from time to time large quantities of lead ore, but with what result I cannot state. Creetown engine-shaft is sunk 11 feet long by 6 feet wide, and is down a little below the 40 fm. level. This mine is drained by a 24-in. cylinder pumping-engine, with 11 in. bucket-lifts, working at a very slow rate of speed, showing the water at this season of the year to be very little indeed. The 40 fm. level is driven on an east and west vein 7 fathoms to No. 2 vein, and 2 fathoms beyond, driven on the latter vein (No. 2) about 8 fathoms north, in which fine lumps of lead ore were taken, some of which are now lying underground. In one place (roof of level) the vein is very productive for about 6 or 9 feet in length, worth 1 to 1½ ton of lead ore per fathom. In the present end the vein is 2 to 3 feet wide, carrying a small leader of lead ore yielding a few cwts., say 5 or 6, in a fathom, and from its regular appearance and other indications an improvement may be expected shortly. This level (40) has been driven south 6 fathoms. In the present end the vein is unproductive, but a short distance back from the end I broke excellent pieces of solid lead ore from the roof. The 30 is driven east of engine-shaft 9 or 10 fathoms, also intersected No. 2 vein, driven north 25 fms., yielding ore, more or less, the whole length. At times lumps of lead ore weighing 60 to 70 lbs., and a stope in roof of this level 2 to 3 fms. long and 2½ fathoms high, produced good saving work. This level (30) is driven 3 fathoms beyond No. 2 vein towards No. 1 vein, and there are about 30 fathoms to drive to intersect it. The 30 has been driven south on No. 2 vein 6 fathoms, yielding spots of lead ore. A winze has been sunk under this level 9 feet, which I was told produced fine lumps of lead ore, and also on the north side of intersection. This being the case, and the vein having a lively appearance in the roof of the 40 fm. level below, the vein should be at once opened out by raising and sinking at the intersection; and this in all probability would throw open payable or tribute ground. In the 18 fm. level No. 2 vein was reached 20 fathoms east of shaft, and a winze sunk to the 30 fm. level. The distance driven upon the vein No. 2 is 7 fathoms south and 14 fathoms north; 3 fathoms back from north end the vein was very productive for about 3 fathoms long in the roof, which has been taken away. This level (18) has been driven west about 36 fathoms. About 21 fathoms from shaft a north and south vein has been intersected, showing spots of lead ore. This end stands 35 fathoms short of cutting the old Pibble vein, from which the former company raised nearly all their ore. This is an important point, and should at once be carried out.—Flat-Rod Shaft: This shaft is sunk 25 fathoms from surface, or 20 fathoms below adit level. The vein was cut at the adit 15 fathoms east from shaft; vein 6 feet wide, driven on its course 6 to 7 fathoms, producing good stones of ore, and very promising, so I was told. Those points are now covered with water; we went through the adit as far as we could get for water. Here the drainage power consists of a very fine wheel, 60 feet diameter, 2 feet 4 in. breast outside, supplied with water from a reservoir just above. This wheel is capable of pumping the water, drawing the stuff, &c.; there is also a large crusher attached. In front there is an excellent site for laying out a good dressing-floor.—New Adit, Creetown Vein: The open cutting is from 12 to 14 fathoms in length, driven upon the vein 10 fathoms, running south of east and north of west. About 3 fathoms from mouth of level a sump is sunk 3½ fathoms; the vein in the bottom I was told is four feet wide, containing orey stuff similar to that now on the dressing-floor, and which is very promising-looking. A few feet south of sump a cross vein was intersected, which disarranged the main or Creetown vein. The level was driven from this point (cross vein) on a part of the vein, carrying on the east wall flookan and decomposed schist. It appears that the principal part of the vein is standing to the west side of level, and it is probable the same remark may apply to the position of this part of the vein in the sump; however, by stripping down a portion of the vein at the adit will throw some light upon it. I like the character of this vein, also the samples of ore, &c., which I saw on the dressing-floor. This level gains considerable cover as it advances. Several pits or trenches have been made upon the back of the vein, all of which I was told produced mineral.—Railway Cutting: This, as well as many other points, I found to be most interesting. The vein here is very wide, and runs in an oblique direction with the cutting, and contains large quantities of mundic. I think you would not do wrong to test this mundic; besides the vein contains a great deal of decomposed or soft kind of killas and sparry branches. The western wall on the Champion side of the cutting is strong greenstone; that on the eastern wall is strong clay-slate, dipping east, which is the probable inclination of the vein. The ground on both sides of the railway is somewhat flattish, consequently to prove this vein to a satisfactory depth pumping and winding power would be required; still you might be able to sink a few fathoms without machinery, and this would be very desirable.—Lochantyre: This mine is situated 3 to 4 miles nearly due south of the Creetown Mines. The engine-shaft is sunk to a depth of 44 fathoms. The power employed for drainage and hauling the stuff was a 12-horse power locomotive, still standing on the mine with suitable pitwork, 44 fms. 7-in. pumps, rods, &c., in the shaft complete; sunk 20 fathoms perpendicular, where it struck the vein. The 20 fm. level is driven about 7 fathoms north, and the same distance south, strong veins containing spots of copper and lead ores. From this point (20) the shaft was carried down upon the course of the vein to the 44, vein 2 to 3 feet wide, yielding a little copper and lead ores. The 44 fm. level is driven north from shaft 7 to 8 fathoms, vein producing spots of lead ore, though not to value. This level continued would intersect the east and west veins hading towards the shaft—distance to drive 9 to 10 fathoms. This level (44) has been driven south of shaft about 10 fms. in a large quartz vein. There are excellent pieces of lead and copper ores lying at surface. The port of Gatehouse is about 2 miles south of the mine, with a good road leading to it. I need not say that the Portpatrick Railway goes through the Champion Mine setts, and that Gatehouse station is close to the eastern boundary, Creetown station in the centre, and Palnure station within a few minutes walk of the western boundary, and the port of Creetown, Wigtown Bay, close at hand, thus offering every facility for transit of your ores and materials. In conclusion, I would remark that, considering the large extent of your mining field, almost undeveloped, and the number of veins contained therein, all producing mineral more or less, these junctions, and, more especially, their intersections, by which nearly all the explorations can be carried forward, whether driving or sinking upon the course of the vein, must be a great advantage where the workings can be brought to bear in opening and proving the veins; at the same time I would advise for a time to concentrate your efforts to two or three points with much vigour. The following seems to me the most likely—the Creetown Mine, including the new adit on Creetown vein.—Champion Mine: Drive deep adit towards No. 18 vein; sink the engine-shaft, and drive the 10 fm. level, also sink upon No. 8 vein; and lastly, to take up or drive the deep and upper adit levels, if not both, drive the deep adit. These points are deserving a spirited trial, and from what can now be seen, good results we hope will follow. There are other points also worth noticing, which can be taken up subsequently. JOSIAH REMFRY.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Champion Silver-Lead and Copper Mining Company (Limited).

Having paid to the credit of your company with the Carlisle City and District Banking Company the sum of £ , being a deposit of £1 per share, I request that you will allot me shares of £10 each on the terms of the prospectus; and I hereby agree to accept the said shares or any smaller number that you may allot to me. Name in full .....

Date ..... Address in full .....

BANKERS' RECEIPT.

Received the , 1870, on account of the Champion Silver-Lead and Copper Mining Company (Limited), from the sum of £ , being the deposit made in accordance with the terms of the prospectus on an application for an allotment of shares in the undertaking.

£..... For the Carlisle City and District Banking Company.

SATURDAY.—Market active for Tankerville, South Frances, West Tankerville, East Lovell, Great Vor, and East Caradon at advanced prices. Tankerville, 13¼ to 13¾; West Tankerville, 3⅝ to 3⅞; South Frances, 28 to 30; East Lovell, 26½ to 27½; Great Vor, 3¼ to 3½; East Caradon, 5¾ to 6¼; Grenville, 2½ to 2¾; South Condurrow, 3 to 3¼; New Lovell, 29s. to 31s.; Rosewall Hill, 22s. 6d. to 25s.; West Maria, 26s. to 28s.; Cook's Kitchen, 17½ to 18¼; Taquarli, 49s. to 51s.; Don Pedro, 2⅝ to 2⅞.

MONDAY.—Market again active. Prince of Wales, Grenville, Tankerville, West Tankerville, Sweetland Creek, Providence, East Lovell, and East Caradon at an advance in most cases. Great Vor receded to 3½, sellers; Prince of Wales, 19s. to 21s.; Grenville, 2⅜ to 2⅝; Tankerville, 13½ to 13¾; West Tankerville, 3⅜ to 3⅞; Sweetland Creek, 3⅞ to 4⅛; Providence, 39 to 40; East Lovell, 28 to 29; East Caradon, 6 to 6¼; West Chiverton, 51 to 52; Perran Wheal Virgin, 32s. 6d. to 35s.; Drake Walls, 23s. to 25s.; Great Vor, 2⅞ to 3⅛; Marke Valley, 6½ to 6¾; Seton, 25 to 27; Taquarli, 48s. to 50s.; Pacific, 20s. to 25s.

TUESDAY.—Market continues active. Prince of Wales in great demand at an advance. Grenville, South Frances, East Lovell, New Lovell, East Caradon, Pacific, Sweetland Creek, West Tankerville, and Providence also in demand. Prince of Wales, 20s. to 25s.; Grenville, 2½ to 2¾; South Frances, 29 to 30; East Lovell, 28½ to 29½; New Lovell, 32s. 6d. to 35s.; East Caradon, 5¾ to 6¼; Pacific, 25s. to 30s.; Sweetland Creek, 3⅞ to 4⅛; West Tankerville, 3⅝ to 3⅞; Providence, 39 to 41; Great Vor, 3 to 3¼; Wheal Agar, 20s. to 25s.; Van Consols, 1⅝ to 1⅞; West Chiverton, 51 to 52; Taquarli, 48s. to 50s.

WEDNESDAY.—Active demand for Prince of Wales, Grenville, East Lovell, Tankerville, West Tankerville, Providence, and New Lovell at an advance. Prince of Wales, 25s. to 30s.; Grenville, 2⅝ to 2⅞; East Lovell, 28 to 29; Tankerville, 13½ to 14; West Tankerville, 3¾ to 4; Providence, 39 to 41; New Lovell, 32s. 6d. to 35s.; Taquarli, 47s. to 49s.; East Caradon, 5¾ to 6; Cook's Kitchen, 18 to 19; West Chiverton, 51 to 52; Don Pedro, 2⅝ to 2⅞.

THURSDAY.—There is a moderate demand to-day for Prince of Wales, Grenville, West Tankerville, East Caradon, New Lovell, and East Lovell. Prince of Wales, 27s. 6d. to 30s.; Grenville, 2⅝ to 2⅞; West Tankerville, 3¾ to 4; East Caradon, 5¾ to 6¼; New Lovell, 32s. 6d. to 35s.; East Lovell, 28 to 29; Tincroft, 44 to 46; South Frances, 29 to 31; Great Laxey, 17½ to 18; Drake Walls, 23s. to 25s.; Great Vor, 3 to 3¼; West Maria, 26s. to 28s.; Taquarli, 46 to 48; Don Pedro, 2⅞ to 2¾.

FRIDAY.—The chief demand to-day has been for Prince of Wales, at an advance of 5s., and East Lovell of 5l. Grenville, Tankerville, and West Tankerville also in good demand. Prince of Wales, 30s. to 35s.; East Lovell, 32½ to 35; Grenville, 2⅝ to 2⅞; Tankerville, 13¼ to 14; West Tankerville, 3¾ to 4; South Condurrow, 3 to 3¼; Seton, 24 to 26; New Lovell, 32s. 6d. to 35s.; Taquarli, 48s. to 50s.; Pacific, 1⅞ to 1⅞; Don Pedro, 2⅝ to 2¾.

Meetings of Mining Companies.

ST. JOHN DEL REY MINING COMPANY.

The half-yearly general meeting of shareholders was held at the London Tavern, Bishopsgate, on Wednesday,

Mr. JOHN HOCKIN in the chair.

The usual preliminaries having been disposed of, the report of the directors, of which the subjoined is an abstract, was submitted:—

The important work of sinking the new shafts, and the works on the surface, preparatory to the erection of the necessary machinery for working the mines in depth, have been carried on steadily and successfully during the half-year. A shaft was sunk 25 fms. 0 ft. 8 in., making its total depth on Oct. 31, 85 fms. 1 ft. 11 in.; B shaft was sunk 24 fms. 0 ft. 7 in., making its total depth on Oct. 31 83 fms. 4 ft. 5 in. The above rate of sinking is the largest that has been accomplished during any half-year since the work was commenced, being an average rate of 4 fms. 1 ft. per month in each shaft, against 3 fms. 2 ft., the highest rate previously attained. The rock passed through during the above period has been hard, strong clay-slate, with occasional layers or bands of quartzose rock and coarse mineral pyrites. No cribbing or lining has been necessary in either shaft during the half-year, and the only timberwork requisite has been the cross-pieces for the brattices. A third ventilating level, or cross-cut, to connect the two shafts, about 40 fms. below the second cross-cut, has been completed. The tunnels and earthworks for conveying the water to the new wheels and back to the stamping-mills have been completed, and some 400 ft. of launders only remain to be erected to complete the entire water-course—more than half a mile in extent—consisting chiefly of tunnels and large expensive wooden launders. The new pumping-wheel has also been completed, and pumps are being fixed in both shafts. The cost incurred on new shaft account during the six months ending Sept. 30 was 8273*l.*, making the total expenditure on this account 24,122*l.*, which sum had been drawn from the reserved fund.

The produce of gold from April 9 to Oct. 8, both days inclusive (184 days) was 56,568·3 olts. The produce from the Morro Velho Mines for the six months immediately preceding (198 days) was 64,344 olts.; and for the corresponding period of 1869 (184 days), 62,073 olts. The decline in the produce was mainly caused by the poor quality of the mineral obtained from the upper sections of the Bahu Mine, which consisted of mineral allowed to remain unquarried when the lode was originally excavated therefrom. As was foreseen, this mineral is becoming exhausted, and owing to the unsafe state of the walls lower down, it is doubted whether it will be practicable to obtain much more mineral from this mine. To compensate for this probable exhaustion, arrangements have for some time been in progress, and are now completed, for raising and treating at reduced expense larger quantities of stone from the Gamba Mine. From this source, and from the East Cachoeira, it is confidently hoped a fair supply of mineral may be obtained, in which case it is likely to be permanent, as it will be obtained from regular lodes, not likely to decrease in size as they descend, and it is hoped may prove of better quality than that left in the Bahu Mine.

The loss in the working of the Morro Velho Mine for the six months was 5977*l.* 16s. 8d. The quantity of mineral quarried and raised from the Morro Velho Mines during the half-year was 23,794 tons. The quantity of mineral obtained during the half-year from the several stations accessible in the Bahu and Cachoeira Mines and from the Gamba Mine was about the same as during the previous six months, though less by 3000 tons than was obtained in the corresponding half of 1869. The quality was not so good as during the preceding half-year, though a little better than for the six months ending August, 1869.

As regards the loss of gold in treatment, the loss of the past half-year appears to have been rather less than during the preceding six months, though more than during the last half of 1869, which showed the lowest loss on record. It should be noted, however, that the recovery of the gold at the Praia works, a considerable portion of which during previous half-years was derived from stone and sand previously accumulated, but which during the past half-year had become exhausted, was ·113 oltava per ton less than during the last half-year of 1869, which, if deducted from the loss of the half-year now under consideration, reduces it to practically as small a loss as in 1869. Still, from 2½ to 2¾ dwts. of gold (of the value of 8s.) per ton of mineral stamped is lost, and though this may be deemed a moderate loss where the particles of gold disseminated throughout the mineral operated on are so very minute, the directors, nevertheless, trust that it is capable of still further reduction. Several experimental measures having that object in view have been and are still in operation. The only work undertaken or performed on the Fernam Paes Estate during the half-year has been driving the level to intersect the Gaia lode at about 12 fms. below the previous stoping space. This level has been driven 34 fms. 4 ft. during the half-year. The outlay on this property for the half-year amounted to 798*l.*

The financial position of the company at the close of the half-year (Nov. 30 in England, Oct. 28 and 31 at Morro Velho and Rio Janeiro) was in England, cash at Messrs. Barclay and Co., 555*l.* 8s. 3d.; estimated proceeds of gold to arrive January 15th, 8500*l.*; now due in part payment for Newcastle property, 2950*l.*—12,005*l.* 8s. 3d. To pay—Loan from bankers, 10,500*l.*; drafts running, 14,000*l.*; a further remittance of gold will be due in March. In Brazil, there was cash at Morro Velho on Oct. 28, Rs. 85,967 $554; ditto at Rio de Janeiro on Oct. 31, Rs. 6977 $040—Rs. 92,944 $594, at 22d. per milreis, 8519*l.* 12s. 5d. The value of the stores in stock at Morro Velho at the close of the half-year was Rs. 272 $774, against Rs. 274 $244 at the close of the preceding half-year. This stock at the current rate of exchange amounts to 25,004*l.*, which, with stores shipped in transit, for which the sum of 2000*l.* has been paid, makes a total of 27,004*l.* worth of materials in stock for the general purposes of the company's mines in Brazil. The reserved fund now amounts to 27,756*l.* 9s. 6d.

The CHAIRMAN said:—It may be in the recollection of some gentlemen present that when last we had the pleasure of meeting you I stated that having during the then past half-year succeeded in completing more effective hauling arrangements for the new shafts we looked forward with confidence to being able to increase the rate of sinking during the half-year then entered upon. This you will observe from the reports now in your hands has been accomplished; upwards of 49 fms. having been sunk in both shafts during the half-year, whilst 36 fms. only were sunk during the preceding six months. I stated at the same time that the blasting compound—dynamite—had been tried, and found most effective. The mine captain under whose superintendence it was used has since reported that a small hole charged with dynamite was found to be more effective than a large hole charged with gunpowder, whilst three small holes could be bored in the time required to bore one large hole. The superiority over gunpowder in hard ground was so apparent to the miners that they were most eager to obtain it. A further and larger supply has, therefore, been sent out, and by the last advices we have heard of its arrival at Rio de Janeiro, and its dispatch to the mines. I have been asked by more than one of your body since the report was issued what proportion of the sinking necessary to reach the lode has been accomplished. I may reply in a few words that up to the end of November we shall have completed just half our work, and that we shall then have been at work two years. It will, doubtless, be noticed that our progress is not very uniform; this is owing to hard layers of quartzose pyritic rock occasionally being met with in the slate, but the superintendent reports that though these hard layers are likely to be met with, it is not probable that the general character of the rock to be passed through will prove harder or more difficult to remove than the strata already penetrated. Advantage has been taken of the dry season, which prevails during the last half of the year, to push forward the new shafts surface works, and very satisfactory progress has been made in them during the half-year. The distance of the new shafts from the old works necessitated the erection of water-wheels near them for pumping and hauling. To drive these the water has to be conveyed over rather difficult ground—first to these wheels, and then back to the stamping-mills. This involved an alteration of the level—indeed, an entirely new water-course, from end to end, of about half a mile in length, carried in some places through hills by tunnels, in others over valleys through lofty aqueducts of large size. These, however, have been now all but completed, and in a very brief period the new water system will be ready to be put in operation. The total cost on new shafts account to the end of September you will have seen has been 24,122*l.* It may be interesting to you to know what portion of that money has been spent in sinking the shafts, and what in surface work, now that nearly half the former and more than half the latter is completed. The entire cost of sinking the 163 fathoms (the amount sunk to the end of September), drawing the water and debris, and timbering the shafts, has been 12,474*l.*, or 76*l.* 10s. per fathom, whilst there has been spent on surface works 11,648*l.* In regard to the operations at the old works, the produce you will have seen has not been quite as good as during the preceding twelve months. Our prospects in this respect are, we hope, a little improved. The loss on the half-year has been 5977*l.*, caused by decrease of produce and increase of expenditure. I have here a comparative statement, showing the items of expenditure under the principal heads during the half-year, and the same items during the preceding half-year, and showing the increase caused by the increase of 2⅝d. per milreis in the exchange, the rise in the rate during the six months, and the increase from other causes. The increase in the exchange is a cause, I need hardly say, over which neither your directors nor superintendent can exercise any control.

COMPARATIVE EXPENDITURE.

	Six months ending Feb. 28, 1870.	Six months ending Aug. 31.	Increase by rise in exch.,	Actual increase	In- decrease
Labour	£14,447	£17,127	£1,637	£1,043	—
Provisions and materials.	5,385	6,015	610	20	—
Stores shipped, duties, and carriage	1,465	3,605	166	1,974	—
Expenses and duties on gold commission, and other charges	1,641	1,538	186	—	£289
	£22,938	£28,285	£2,599	£3,037	£289
				289	
				£2,748	

Increase by exchange .... £ 2,599
" expenditure .. 3,037 — £289. Total increase, £5,347.

£28,574
Decrease by expenditure .. 289

£28,285 the amount expended to Aug. 31, 1870.

The result is you will perceive, if I have made myself understand, that our cost in sterling has been increased 2599*l.* from increase in the rate of exchange, 1043*l.* in labour, principally in payments falling due at this period of the year, but which does not affect the year's account, and 1974*l.* in stores shipped, duties, and carriage thereon, which has to be spread over the year, and there has been a decrease of 289*l.* in other items, notwithstanding the increase in the exchange. The supply of stone has been about the same as during the first half of the year, and this we hope at least to maintain. The yield has been inferior. In this latter respect we cannot possibly say what is in store for us, but the supply and yield had both improved by the last advices, and the superintendent speaks hopefully of the improvement proving permanent. I may here remark that the value of 1 dwt. of Morro Velho gold is only worth about 3s. 5d. I mention this, as otherwise persons comparing the results obtained at Morro Velho with those obtained at other mines, where the metal is of higher standard, and usually calculated at 4s. a pennyweight, might draw conclusions unfavourable to our cost of working. In regard to improvement in treatment leading to a diminished loss of gold, we cannot, I am sorry to say, report any material improvement in this respect, though strenuous efforts are being made to discover a means of reducing the loss. Our waste sand carries with it at least 8s. worth of gold for each ton of stone stamped. We know that whilst a few years ago ores of other metal of, perhaps, equal value were allowed to go to waste, they are now by improved means treated with success, and we see no reason why gold ores should be the exception. We are not, of course, sanguine enough to hope to recover all, but we think we have a right to expect, by persevering industry and research, that improvements be made in this respect. The work of driving the level to intersect the Gaia lode, on the Fernam Paes Estate, has been well advanced during the half-year. Early in the coming year it is probable the lode will be reached, when, if it proves of the same quality as at the upper level, it will afford means of profitably employing a portion of our people. You will have come to the conclusion, from the entry in the finance statement, at page 10 of the report, that the Newcastle property has been disposed of. Personally, I rather regret that prudence has compelled us to part with it so soon, for I always looked forward to have realised something on its sale, if we could have deferred it for a few years longer. We, however, thought it but prudent to sell it at the present juncture. It has produced 13,450*l.*, which is within 50*l.* of what was originally lent upon it. There were some expenses incurred shortly after coming into possession, which brought its cost up to 14,136*l.*, in our books, and there have been some sums expended since in improvements to keep up the rents, and so increase its value. This, of course, is a loss to the company, though had not the outlay been made the loss in rental must have been greater. On the whole, therefore, seeing that the sale has been in the nature of a forced one, we think we have done the best, under the circumstances. There is to be 6000*l.* left on mortgage on the property for five years, at 4 per cent., and payment of 2500*l.* is to be deferred for one and two years, these being conditions we found it necessary to comply with to effect the sale, but which financially we do not apprehend difficult in dealing with. In regard to finance, the figures are so fully given in the report that I will not detain you by repeating them. If, however, any gentleman has any questions to ask on this or any other point I shall be happy to afford him the fullest information in my power, as we are anxious that the shareholders should be as fully informed as we are on all points.—He concluded by formally moving the reception and adoption of the report.

Mr. SPENCER HERAPATH enquired what had been the average rate of exchange?

The CHAIRMAN said it was 22d. odd, against 19d. odd last half-year.

Mr. JAGO would be glad to learn the relative cost of gunpowder and of dynamite for blasting purposes?

The CHAIRMAN had made a calculation as to the relative cost, and sent it to the mines for verification. He believed that they would find dynamite cheaper, considering the larger amount of work that could be done with it. They found that a hole of 1 in. with dynamite was equal to a hole of 2¼ in. with gunpowder, and three of the small holes could be made in the same time as one large one.

Mr. LEVANCHY enquired the position of the Fernam Paes property?

The CHAIRMAN said that they were realising a profit of about 300*l.* per month, when, in consequence of coming upon old workings, the existence of which was unknown to them, their workings broke in, and their operations were interfered with. A lower level had to be put in, but this had been progressing satisfactorily, and he believed they would again be at work there at the commencement of the year.

Mr. TENDRON thought it desirable to know whether the Gamba was likely to hold out until the old lode was reached, for this he considered to be the point of greatest interest to the shareholders?——The CHAIRMAN thought so; they were raising ore expensively six months since, owing to their having to raise it from various places, but they had now got their workings so opened that they could work more regularly.

Mr. SPENCER HERAPATH said the real question was—how long would the reserve fund last? What are the prospects of the future? And are they to look for a call? They had expended 14,000*l.* this last half-year. [The Chairman expressed dissent.] They had been working two years, and were half way down, so that they might expect to be two years longer. In the last half-year they had reduced their reserve fund, so that it would be quite as much as the remaining 27,000*l.* would last them.

Mr. LEVANCHY had doubts upon the matter 18 months ago, but from the present report he believed they would now get on without a call.

The CHAIRMAN said that he had stated at the last half-yearly meeting that he believed the half-year just past would be their worst, and he hoped his opinion would prove correct.

The report was then unanimously adopted, and the usual complimentary vote terminated the proceedings.

PACIFIC MINING COMPANY.

The annual general meeting of shareholders was held at the London Tavern, Bishopsgate, on Tuesday,

Mr. THOMAS HUGGINS in the chair.

Mr. W. J. LAVINGTON (the secretary) read the notice convening the meeting.

The report of the directors stated that since the time of the last meeting they have met with constant disappointments, and the mines have in no way realised the brilliant prospects which were held out at the time of purchase. Feeling anxious, and wishing better to understand the properties, Mr. Allington, one of the board, at their request, proceeded to California in May, and inspected the mines. He found the machinery at Union Hill Mine only sufficient to keep down the water, and totally inadequate to sink deeper. As new machinery would have cost between 7000*l.* and 8000*l.*, the directors did not feel justified in making so large an outlay, and consequently closed the mine for a time, thus effecting a saving of about 2000*l.* per month in expenses. Should the Lander Hill turn out a success, this mine can be re-opened hereafter at a comparatively moderate outlay. It will be seen by Capt. Brown's report (and they have every reason to be satisfied with him) that the two special points to which he is now directing his attention are the cutting of a lode which has been of great value in the adjoining mines, and also the cutting of the main lode at the 550 ft., and which has been very productive at shallow levels; the former he expects weekly to do, the latter in about two months' time. Capt. Brown is sanguine that if either of those points turn out rich it will exercise a permanent and beneficial result, and altogether alter the prospects of the mine. Finding the lodes run westerly, they have secured an extension of ground in that direction, which may hereafter prove of great value, and operations upon it have been commenced by sinking a new shaft.

The CHAIRMAN said that the last time he addressed the proprietors he hoped that on this occasion he would have been in a position to congratulate them upon the results of the working of the undertaking. But it was not the good fortune of the board to be able to do so, although he had no hesitation in saying that everything possible had been done to ensure success. As had been seen by the report just submitted, their colleague, Mr. Alington, had visited the company's properties. The first telegram which the board received from that gentleman informed them of the fact that the pumping power at Union Hill Mine was not equal to sink the shaft to so immense a depth, and that the necessary machinery to do so would incur an expenditure of between 7000*l.* and 8000*l.* The directors felt they were not justified in incurring so large an expenditure, particularly as the means at their command were comparatively limited, and as the working of the mine could be at any time resumed by pumping out the water. Therefore, they determined upon suspending operations, and thereby saved a current expenditure of something like 2000*l.* per month. At the other mine, the North Buel Star, at Lander Hill, the manager expects, according to the report received to-day, to cut the lode in January. The expenses here had been in proportion very much less than those at Union Hill, and Capt. Brown seemed to be very sanguine as to results. He (the Chairman) hoped those expectations would be realised. The directors' desire was to interchange ideas with the shareholders upon the present position of affairs, and with that view Mr. Alington would afford every information, which would be much more valuable than anything imparted by the other directors, who had not had an opportunity of visiting the mines. He then moved that the report and accounts be received and adopted.——Col. NAPIER STURT, M.P., seconded the proposition.

Mr. JULIUS ALINGTON said he arrived at Lander Hill Mine in May, and the day before he reached there he heard a report that a very rich lode had been struck. Of course, this very much raised his spirits, seeing that he went out with the expectation of finding rather poor results, from the reports received from Capt. Brown. Upon his arrival at the mine he found Capt. Brown in very excellent spirits; Capt. Brown said he was now satisfied they had a good mine, although when he first arrived there things looked very black. Everything appeared to be conducted most economically, and was in efficient working order. He went down the mine, and immediately proceeded to the 400 *ft.* level, where the discovery had been made. To all appearances there was a regular, well-defined rich lode of silver, from which 8 to 10 tons of ore had been taken before his arrival. He took some samples, and had them assayed by two different assayers; one sample yielded 94 lbs., and the other 240 lbs. of silver per ton of stuff. He found that both mills required repairs, and that a more efficient staff was necessary, which was very difficult to obtain. These were matters for very serious consideration. The manager of the Manhattan Mill allowed him reference to the books of that company, and with the assistance of Mr. Beevor they went carefully into the matter, and made an estimate of the cost of reduction at their own mills. As compared with the cost at the Manhattan they calculated that upon the old contracts there should be a saving of $875 upon every 100 tons of ore crushed; and as there was an impression that from 7 to 8 tons of ore would be raised per day, there seemed reason to believe that they would at once receive regular remittances; but a few days after a letter was received from Capt. Brown, that the lode had become disordered. As to Union Hill, he found that a fortnight before his arrival a very rich pocket of ore had been discovered, but that during the fortnight immediately following there was a positive loss. Upon descending the mine he found it was almost like walking through a continuous shower bath, while at that part of the mine where the discovery was made the indications were more like that of a pocket than a lode. At the bottom levels the lode was well-defined, but entirely without any indications of precious metal. It was as much as the machinery could do to keep the water in fork, and the shaft was in a very bad state of repair. It was clear that no further works could be carried out without new machinery. He went to San Francisco, and got an estimate of the cost, and he found that if the mine were stopped its condition would not be injured if it should be afterwards determined to resume operations. Therefore, on his own responsibility, he determined to stop the working, and thereby saving a large monthly expenditure.

Mr. BENNETT could not help thinking that the altered prospects of the company were attributable to ineffective management. He did not wish to make any charge against Capt. Brown, although he was very far from being satisfied with him. Why did not Capt. Brown raise the rich ore, which they had been told was worth over $100 per ton, instead of that which was scarcely worth selling? His charge against Capt. Brown was that he had only sold a small quantity of ore, and that was very improperly selected, whereas he should have sold the richer ore properly selected. He then referred at some length to the richness of the surrounding mines, and stated that there was no reason whatever why their mine should not produce as rich ore as those in the district.

Mr. ALINGTON said that the ores he took from the mine were considered fair average samples.

Mr. BENNETT said that the stoppage of the Union Hill Mine was a very disastrous step to take, and quoted the opinion of Capt. Faull (which has already appeared in the Journal). He (Mr. Bennett) said that it was injudicious to take such an important step without coming to the shareholders to ascertain their opinion thereon.

Mr. BENNETT said that an estimate had been made by Mr. Watt, who stated the entire cost of the machinery for the purpose of unwatering the mine and working the lower levels would not exceed 4000*l.* or 5000*l.*

Mr. ALINGTON said he was almost positive that Mr. Watt never saw the mine.

Mr. BENNETT said that was extraordinary, seeing that Mr. Watt had charge of the mine for a certain period, and was the manager of the adjoining mine.

Mr. ALINGTON said that Mr. Watt's book-keeper had the mine in charge.

Mr. KITCHIN was strongly of opinion that the shareholders should have been consulted on the question of the stoppage of the Union Hill Mine; and as to Lander Hill, all its favourable prospects seem to have vanished. The only parties who appear to have benefitted were the directors, who had received in fees 625*l.*

The CHAIRMAN said that at the time the company was formed the board meetings were held twice and three times a week, and from that time to the present their attention had been unremitting.——Mr. KITCHIN thought the directors should be the first to come forward and say they would wait till better times until they took their fees.

The CHAIRMAN said that under the Articles the directors were entitled to a remuneration of 1500*l.*, but had taken 625*l.*

Mr. KITCHIN said he had determined to propose an amendment, that a committee should be appointed, to take into consideration the whole affairs of the company from its commencement. The committee should investigate the agreements with the vendor, and ascertain the grounds upon which these properties were so strongly recommended for purchase, which they were told would yield a minimum dividend of 20 per cent. The committee would also enquire into the stoppage of the Union Hill Mine, and also as to the future management of Lander Hill; and the committee might suggest a reduction in the directors' remuneration. He then proposed that a committee of shareholders should be appointed to investigate the affairs of the company from its commencement, and to report to an adjourned meeting their recommendations as to the future management of the company.——Mr. KEITH seconded the amendment.

Mr. COURTENAY said that he was the only shareholder who appeared to take a not very sanguine view of their prospects at the last meeting, but he confessed that he did not expect to find the company in such an adverse position upon the present occasion. He fully agreed with the amendment.

Mr. COPE said the directors could have no possible objection to the appointment of a committee of consultation, for they were anxious to afford every information in their power.

The amendment being put, was carried unanimously, and the resolution for the adoption of the report and accounts was consequently lost.

Messrs. Cave, Bennett, Kitchin, and Courtenay were appointed the committee.

Mr. KITCHIN then proposed the re-election of Mr. Huggins as director, which was seconded by Mr. BENNETT.

The resolution was put and carried unanimously.

The CHAIRMAN, in acknowledging his re-election, stated that no effort had been spared on the part of the board to ensure success, but disappointment had followed upon disappointment, and he was not at all surprised at the dissatisfaction of the shareholders. It was not, however, in the power of the directors to make results as they could desire them, but he hoped the committee now appointed would be able to do that which the directors had been unable to do.

A vote of thanks to the Chairman terminated the proceedings.

GREAT WHEAL VOR UNITED MINING COMPANY.

The quarterly general meeting of shareholders was held at the offices, Gresham House, on Wednesday,

Mr. GEORGE NOAKES, F.G.S., in the chair.

Mr. J. J. TRURAN (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

The CHAIRMAN said that this occasion was the thirteenth anniversary of the present committee, and also of his position as Chairman; and during the whole of that period they have never hesitated to give a truthful statement as to the condition of the mine as it was at the day of each meeting, and they would not deviate from that course upon this occasion. He would, in the first place, submit the report of the committee, as follows:—

The committee regret to report a considerable loss upon the working of the past quarter. The improvements which have been so frequently reported as offering prospects of an encouraging character have, so far, not borne out the anticipations formed of them. The discoveries during the last two years have, unfortunately, proved short and bunchy, added to which a great length of disordered ground has been passed through west of Edward's shaft. The committee, encouraged by the discoveries that were made about Edward's shaft, as well as from the favourable opinions so generally entertained of the prospects in the western ground, have incurred heavy costs in the erection of pumping and winding engines, in the sinking of Edward's shaft, and the putting in of pitwork and skip-road to the 162 fm. level. Taking into consideration the large amount of rich tin ground standing in reserve when these works were commenced, they were led to hope that the eastern stopes would hold on until new and productive discoveries should be opened out in the western ground. They regret that they have been disappointed in these expectations; but they have, nevertheless, a belief that on further development, west of Ivey's and Edward's shafts, the mine will again open out profitably productive. The heavy cost consequent upon the laying out a new mine at Edward's being now completed, the general cost will be reduced. In order to obtain independent opinions as to the state and prospects of the mine, and the operations carried on by the company's agents, and also to learn how far the general prospects warranted the expectation of a more successful development, the committee have employed two very competent mine agents to inspect—Capt. Hollow, of Providence Mine, and Capt. W. Rich, of Wheal Uny. They have inspected separately, and they confirm the opinion so generally entertained, that the ground west of Edward's shaft being parallel to the richest part of Old Wheal Vor lode, and between the same two great cross-courses, which apparently conduced to the riches of the old mine, will also, on more extended development, open out highly productive ground on the Metal lode. These agents recommend the removal of the dressing-floors to the vicinity of Ivey's or Edward's shafts. The committee have frequently discussed this question, and have had estimates made of its cost; but the heavy outlay on Edward's shaft, and other local considerations, did not justify its immediate adoption. The present floors were laid out for the working of the old mine, and have an engine to drive 96 heads of stamps, and a pumping-engine to raise water from Wolfe's shaft, close adjoining. Until very recently the water obtainable at Metal Mine would not have been equal to the requirements had the floors been removed from their actual position. The present state of the finances would not allow the laying out of new floors, except through the aid of the shareholders. The committee will push on the development of the mine with all possible energy, and with due regard to economy. They believe the decline of the mine to be temporary, and that an enlarged development will in the course of another year place it again in a profitable and satisfactory state.

The report of the agents was then read, as follows:—

Dec. 20.—Ivey's engine-shaft is sunk 3¼ fms. below the 216, and in the present bottom of the shaft the ground is more congenial for the production of tin, the lode being 18 in. wide, worth 15*l.* per fathom. Since the last meeting we have cut drop-plat below the 216, cut cistern-plat, fixed bearers and cistern, and an 8-in. lift from this to the 204, and are now in good course of sinking; we calculate to sink to the 226 by the next meeting. The 216 is driven 13¼ fms. west of shaft, and communicated with the winze sunk below the 204, which has laid open a large piece of ground, which will be worked at about 10s. in 1*l.* We are now driving the 216, west of the winze, on lode and branches from 2 to 3 feet wide, worth 15*l.* per fathom; this is a very kindly end, and we are of opinion that it will soon further improve. In the 204, driving west, the lode is 2 feet wide, composed principally of mundic and blende, and producing a little tin, but not of much value at present. A winze sinking in the bottom of this level, 15 fms. west of the winze, is communicated with the 216, and about 7 fms. behind the present end is down 8 ft., and is on a lode 2 ft. wide, worth 40*l.* per fathom; this is a most important point, being in unexplored ground. In the 172, driving west of shaft, towards the winze sinking below the 162, we have passed through a small cross-cross, since which the lode has not been been defined; but as this end is only about 20 fms. east of the winze referred to above, where we have a very productive lode, we look forward to great success in this piece of ground. Edward's engine-shaft is sunk 2½ fms. below the 162; here the shaft is 2 fms. north of the lode, but by the underlie of the lode in the 162, the shaft will be in the lode at the 172 fm. level. The 162 is driven west of Edward's shaft 7 fms.; here we are cross-cutting south to intersect the south part of the lode, seen in the level above. A winze sinking below this level, 10 fms. east of shaft, is down 6½ fms., and is on lode and branches 6 ft. wide, worth full 60*l.* per fathom, and looks very promising to continue. In the 152, driving west of the great cross-course, the lode is divided in two parts, 4 ft. from each other, both letting out water, but neither productive. We look forward to these coming together, when we may expect a favourable change. Our tribute department continues about the same as for some time past. During the past quarter we have completed the pitwork in Edward's shaft to the 162, with sinking lift below that level; and we are glad to say that both engine and pitwork are working very well. Although the water is but little at Edward's, it has greatly relieved Ivey's engine. We are now well provided with engine-power, and as the great expense in fixing the machinery, pitwork, &c., is at an end, with our present prospects we expect to do much better the coming quarter.—STEPHEN HARRIS, JOHN JAMES.

The CHAIRMAN said that during the 13 years he had occupied that chair there had been occasions when great difficulties were encountered, while at other times they were participators in a great prosperity; but now they had arrived at another crisis, which he regarded of so much importance that he determined, even against the advice of his own physician, let the consequences be what they may, to be present upon this occasion. He could only regret, as all must do, that the prospects of the mine are not so good as had been anticipated, and that the result of the past three months had not been commensurate with the prospects presented at the last meeting. They had had a wonderful deposit of tin, and they had hoped, that before that deposit had become so exhausted as to reduce the returns, that valuable discoveries would have been made in the western ground, yet unwrought. From time to time discoveries had been made, which in themselves appeared exceedingly important, and more than encouraging, but when opened out they proved to be bunchy; therefore, their tutwork operations, which, he was sorry to say, were very limited, did not yield an amount of tin sufficient to keep up the returns, and the reserves—as the committee had from time to time

fairly told the shareholders—were materially reduced. But it should not be forgotten that the mine had been in a much less satisfactory position. Ten years since they could not raise 4 tons of tin per month, but since then the returns had increased to 70 tons per month, and there could have been returned 80 or 90 tons, if it had been justifiable to do so; and at one time it was thought the mine would maintain that position during the present generation. But unexpected vicissitudes and changes were encountered. At the 162 the lode was exceedingly rich at the two ends—one driving west from Metal shaft, the other east from Ivey's shaft, and within 3 fms. of holing. The lode in Ivey's shaft, 5 fms. below this level, was also worth 400*l.* per fathom, and there appeared no doubt that the lode in the levels would "hold home" of the same value; but on driving a hard bar of ground was encountered, which suddenly disordered the lode in the levels and shaft, and instead of being worth 300*l.* to 400*l.* per fathom it became almost worthless. Still, irrespective of that, they had raised an immense amount of tin, and their hopes had been directed to the virgin ground west of Ivey's and Edwards's shafts. He had repeatedly referred to this portion of their mine, and the favourable opinion formed of it was general throughout the district. Again, at the 204, the winze sinking below that level was exceedingly rich, but on rising from the 216 the main part of the lode was found to have gone down north of the rise, and they expected on driving further west to meet this rich lode; but as no one could see through the rock, it was impossible to say what would be the result. The present position of the mine was this—contrary to all expectation, they had been unable to meet the current cost, but he could not help thinking, that with the western ground unexplored, the present decline was but temporary, and that it would be unwise on the part of the shareholders not to develope that most important part of their property. With those few remarks, he would proceed to submit a statement, showing the financial position of the company up to the present time. It was as follows:—

The audited cash account to Nov. 10 showed a balance in hand of..		£1433 18 1
Since which date there has been received—		
Tin sale in December		2691 13 9
Sundries from the mines		33 15 3
Total		£4159 7 1
And paid—Labour pay for October	£1255 9 5	
Sundries, postage, &c.	5 7 3=	1260 16 8
Balance (cash and bills)		£2898 10 5
The actual account stands this day as follows:—		
Balance in hand, as above		£2898 10 5
From which deduct—Merchants' bills for October....	£ 714 2 4	
Cost for November, including merchants' bills	2048 14 10	
Sundries, salaries, &c.	191 14 0=	2954 11 2
Balance against the company		£ 56 0 9

The CHAIRMAN thought it was his duty to state that over and above that 56*l.* there was 700*l.* outstanding, but that he thought would be wiped off by the old iron, &c., now on the mine to be sold. That was the whole of their indebtedness up to the present time, and from the statement of the agents he did not think they would be very far behind paying the cost during the next three months. There had been very heavy expenses during the last two years at Edwards's shaft, the whole of which had been paid out of the revenue; that expenditure had now ceased, and they hoped now to begin to realise some advantage from it. At all events, the committee would not call upon the shareholders that day, and he hoped it would also be unnecessary in March.

A SHAREHOLDER asked what amount of unexplored ground there was in the mine?—The CHAIRMAN thought that they had explored about one-half of the ground embraced in the mine. It was not for him to say whether so large a deposit of ore would be found westward as that which they had developed for years past, but all practical mine agents said that as at a quarter of a mile north of this ground there was the Old Wheal Vor main lode, and parallel to their western shaft; that was the point at which the lode was richest and widest, and it lies between the same two great cross-courses. All mine agents are agreed that this western ground, under such circumstances, cannot fail to be highly productive.

Mr. DIVETT, referring to Wheal Metal, said that they were now approaching at a deeper level the point where a rich course of tin had been worked from surface down to about the 70. Whether that bunch of tin would "make" in depth was a question that was well worth investigating.

The reports and accounts were passed and allowed, and the committee of management were re-elected.

Mr. HARVEY (Torquay) proposed the re-election of Mr. G. Noakes as managing director and Chairman, with the usual remuneration.—The CHAIRMAN said that he considered it was his duty to do all he possibly could to reduce the expenses, and therefore begged to reduce his salary 10*l.* per annum. (Hear, hear.)

Mr. MARSDEN said the shareholders could but appreciate this liberal act on the part of their worthy Chairman, and accept the proposal in the same spirit in which it was offered; but he would also say that when they shall return to a state of prosperity it would be their duty to revert to the same rate of remuneration for their worthy and indefatigable Chairman. (Hear, hear.)

The amended resolution was put and carried.

The committee of management also voluntarily reduced their remuneration from 40 to 20 guineas per quarter.

Messrs. Moates and Co. were re-elected auditors.

A vote of thanks to the Chairman concluded the proceedings.

NEVADA LAND AND MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Terminus Hotel, Cannon-street, on Monday,

Mr. E. L. NUGENT in the chair.

Mr. J. A. ROBERTSON (the secretary) read the notice convening the meeting, and the report of the directors was then submitted and unanimously adopted, which was as follows:—

The revenue account to the end of July showed a profit of 3682*l.* 0s. 10d., the earnings being made in a period of seven months and a half, while the bulk of the expenses extend over twelve months. The profits made during the past six months have been less in proportion than those of the preceding half-year, owing to a falling off in the production of the Alpha Mine; but in October they recovered the ledge, which it is expected will shortly become richer. To secure a continuous and reliable supply of ore Mr. Dunne acquired for the company an interest in some mines situate in the Pinto district, in the neighbourhood of White Pine. Ore of the value of $5000 has been obtained from these mines, but as they require some outlay to open them properly work has been suspended there with the exception of the Galena, which has been leased for a short time at a royalty. Out of the balance of 2182*l.* 0s. 10d. to the credit of the revenue account the board recommended that the sum of 500*l.* be written off the account of permanent improvements to meet depreciation and wear and tear of machinery. The balance of 1682*l.* 0s. 10d. would be sufficient to pay a dividend for the half-year at the rate of 10 per cent. per annum, but in the present financial position of the company the board recommend that the declaration of a dividend be postponed.

Upon the proposition of the CHAIRMAN, seconded by Mr. HARVEY, a resolution was passed creating 10,000 new shares, of 1*l.* 10s. each, to be issued how and when the directors think fit.

The CHAIRMAN then moved a resolution for making ten members personally present sufficient to form a quorum at general meetings of the company.—Mr. DAMIEY seconded the proposition, and it was unanimously agreed to.

Complimentary votes to Mr. Dunne for his exertions on behalf of the company, to the Chairman for his energy in visiting the company's property, and to the directors, terminated the proceedings.

We learn with much regret that Mr. Balcombe, the managing director of the Blaen Caelan Company, met with an accident near that mine on Friday last, whereby he has broken his leg just above the ankle-joint. He was removed to Aberystwith in great pain, but is progressing well.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending December 18 were 9003*l.* 15s. 2d.

THE LATE AND PRESENT EARL DERBY ON THE LUXEMBOURG QUESTION.—In the Debate in the House of Commons, in 1867, on the Luxembourg question, Mr. Labouchere and Mr. Aytoun protested against the Government involving this country in a guarantee, and asked, in case the Territory of Luxembourg should be violated, whether this country was bound to interfere by force of arms. Lord Stanley, the Foreign Secretary, replied—"All that the Government had now done was to guarantee the neutrality and possession of the country by the King of Holland; and that guarantee was a collective one which was essentially different from a separate guarantee. It was a case of 'limited liability,' which had rather the character of a moral sanction then a contingent liability to go to war." In the House of Lords, a few days later, Lord Houghton asked for some further explanation of the nature of the guarantee. The Earl of Derby (Prime Minister) replied that "the difference between a collective and an individual guarantee was well known. By the former, if there was difference of opinion between the parties to the guarantee, no one party was called upon to undertake the duty of enforcing it. It depended on the union of all parties." Surely Great Britain has had sufficient experience of the folly, danger, and valueless character of collective treaties and foreign "guarantees!"

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—H. Francis, Dec. 22: The discovery in No. 2 adit continues to look the same as last week, and going east it is improving in width and strength. The stopes in the back of the No. 2 adit will yield about 1 ton of lead ore per fathom. We have commenced driving north, to intersect the body of lead discovered in No. 2 adit, and I am of opinion that we shall soon get into this ore. Our dressing operations are in full work. We are preparing our third parcel of ore for market.

ASSHETON.—W. Johns, W. Tipton, Dec. 21: The lode in the winze sinking below the adit level is still looking well, worth 1¼ ton per fathom. In the adit level south the lode has indications of an early improvement. The stopes in the back of this level have improved, worth 1¼ ton per fathom. We are clearing out the 28, south of Gundry's shaft, but the same being full of stuff in places we cannot yet see the end. We are accumulating a large quantity of stuff, and, if the weather proves favourable, shall soon make a beginning to dress it for the market.

BALLACORKISH.—Capt. Treuren, Dec. 17: In the cross-cut driving east towards King's lode we have intersected another small branch, composed of quartz, chlorite, and prian, intermixed with sulphur; the ground is improved in appearance, and of a highly mineralised character, and the water issuing very strongly from the forebreast. In the end driving north of the Dowk vein, at the 12, we have to-day broken some good stones of lead from the lode against the forebreast. The men are making good progress in driving, and we shall soon get under the run of ore ground gone down in the bottom of the adit level. We are urging on the dressing of the tributers' ores as fast as possible, and the men are working very energetically in their respective bargains.

BEDFORD CONSOLS.—Capt. Mitchell, Dec. 21: The lode in the shaft, on the north tin lode, is of a highly promising character, and the part carried for 6 ft. wide is tinny throughout. The samples taken from the different parts of the lode on Saturday and Monday last (as will be seen) are very satisfactory;—No. 1 sample contains 15 lbs. 5 ozs.; No. 2, 1 cwt. 2 qrs. 21 lbs. 4 ozs.; No. 3, 3 qrs 15 lbs. 13 ozs.; No. 4, 3 qrs. 4 lbs. 9 ozs.; No. 5, 1 qr. 2 lbs. of black tin to the ton of stuff. This will give an average of over ¾ cwt. to the ton, and I have no doubt but what the lode for the whole width of the shaft will be found good paying work for the stamps. There is no particular change in the cross-cut south to notice since last report. We are pushing on with the dressin as fast as possible, and hope to be finished next week.

BLAEN CAELAN.—J. Evans, Dec. 21: The engine-shaft is sinking below the 10 in favourable ground on the dip of the lode with fair dispatch. We carry a small part of the lode by the shaft, which is strongly spotted with lead ore and mundic. The lode in the 10, east of shaft, is improving, and is now worth nearly 2 tons of lead ore per fathom. No change elsewhere. The severe weather impedes surface operations.

BLUE HILLS.—S. Bennetts, A Gripe, Dec. 17: The ground in the shaft below the 66 continues good, and water still very easy. The 66, west of Letcher's, is at present poor, the lode being 1½ ft. wide, and containing a little tin, but not sufficient to value. The east end at this level is improved during the past week; the lode being 2½ ft. wide, tinny throughout, and worth 7l. to 8l. per fathom. The Wheal Betsy lode in the 13, east of Polyear, is worth 6l. to 7l. per fathom; and the same level, west of heave, is worth 6l. per fathom. The stope above this level is not quite so valuable as last reported, at present is worth 10l. per fathom. The tribute pitches are without much change.

BRONFLOYD.—T. Kemp, Dec. 21: No. 1 Shaft, South Lode: The part of the lode we are cutting through to the north from shaft, in the 36, is composed of spar, intermixed with lead ore; the lode, so far as cut into, is of a very promising nature, but owing to the hard character of the ground the men are making but slow progress.—No. 3 Shaft, North Lode: The part of the lode which is being opened by the 84 end, west from winze, is chiefly composed of blue slate, intermixed with strings of ore, saving work for dressing. I have no doubt as the levels advance west the lode will improve. The lode in the 73 end has during the past week very much improved, and is now producing 1 ton of ore per fathom. With the exception of the 40 end, which is improving, and is in more mineralised ground, there is no alteration in any other bargain of the mine. We sampled 100 tons of lead ore on Tuesday, for sale on the 30th inst.

BUDNICK CONSOLS.—J. Rawlings, R. Hill, Dec. 22: There is no improvement since our last report. The tributers are raising their usual quantities of tinstuff, the steam-stamps are working exceedingly well, and all operations going on satisfactorily.

[illegible].—T. Hodge, Dec. 21: Fair progress is being made in sinking below the 50 fathom level. In the 50 cross-cut south nothing has been met with.—North Lode: In the 50, west end, the part of the lode carried is yielding some good stones of lead, and likely to improve. In the 40, west end, the part of the lode carried continues to improve, yielding coarse dressing work for lead; it is letting out much water, which I consider a good indication. The stope in the back of the 50 west will yield 10 cwts. of lead per fathom. The stope in the bottom of the 40 west will yield 8 cwts. of lead per fathom. The stope in the back of the 40 west will yield 8 cwts. per fathom. There is nothing new elsewhere to report in the underground department. Our dressing is going on regularly, and we have about 4 tons of lead dressed. The parcel of blende sold on the 17th realised 2l. 12s. 6d. per ton. I estimate we have about 44 tons.

CAPE CORNWALL.—R. Pryor, J. Davey, Dec. 20: In the 100, driving east of cross-cut, the lode is producing good stones of tin. The ground in the 100 fm. level cross-cut, driving north, is without alteration to notice.

CAPPAGH.—W. Thomas, Dec. 19: At the skip-shaft, sinking under the 94, we have a promising lode, consisting of good grey stones, with purple and grey ore of rich quality, and the rock is of a very promising character for producing ore, not being near so hard as in the levels above. In the winze sinking under the 94, east of skip-shaft, the lode is passing through a hard bar of ground, but judging from the favourable change in the skip-shaft I expect we shall also have an improvement in this winze. The stope under the 84, west of skip-shaft, is producing purple ore, carbonate of lime, &c. In the stope in bottom of the 64, west of engine-shaft, we have a good lode, with solid purple and horsefleah ore, 1 ft. wide. The stope in back of the 64 is producing good stones of ore. The winze sinking under the 54, to come down on this stope, is also producing stones of ore, quartz, carbonate of lime, &c., and will, I expect, lay open orey stopes east and west. In the cross cut north, in the 24, east of skip-shaft, the end is very wet, and we expect soon to intersect the north lode. In the winze sinking under the 24 on the north lode, west of skip-shaft, we have rich stones of ore, quartz, gossan, &c.; this lode is vughy, and very wet, and all in whole new ground. We are dressing ore as fast as short days and wet weather permit, and shall probably in four months from the time we began to work have a cargo of ore for market.

CARDIGAN BAY CONSOLS.—Charles Williams, Dec. 22: Pensarn: The lode in the 10, west of engine-shaft, is 4 ft. wide, and consisting of spar, slate, a little blende, and silver-lead ore, worth of the latter about 2 l. per fathom. The same lode going east will no doubt be found as equally productive. The water from the old mine should be pumped out at once, so as to open into this lode at a deeper point, and thereby increase the produce of the mine very considerably.—Brynarian Old Adit: I expect to cut the lode in this level every shift. The ground is without change.—Boundary Adit: We have opened into the lode about 6 ft., and not yet reached the footwall. The lode for that width is composed of spar, intermixed with slate, and very strongly spotted with lead and copper ores, a very promising-looking lode. The north and south lode is yielding very good ore.

CHIVERTON.—G. E. Tremayne, J. Borlase, Dec. 21: Borlase's engine-shaft is now down to within a few feet of the 70; the lode in the bottom of shaft is of a promising character. In the 60 fm. level south, on north and south lode, since our last report we have cut the east and west lode, and turned the level on it, which is about 12 in. wide, of a most promising appearance, composed of spar, flookan, quartz, and mundic; we think when the level is driven out of the influence of the north and south lode this lode will be productive. The lode in the 40 fm. level east is 2 ft. wide, composed of prian, flookan, and quartz, with mundic and a little lead. The lode in the 40 west is from 1 ft. to 1½ ft. wide, composed of spar and flookan, and producing saving work for lead and blende. We like the appearance of the lode in the shaft better than for some time past, and expect something good here shortly.

CLARA CONSOLS.—R. Northey, Dec. 17: Sandford's engine-shaft is in regular course of sinking below the 32. The lode in the 32, west of Sandford's shaft, is about 1½ ft. wide, producing spots of lead, blende, and pretty much quartz; the lode in which we have been driving west at the 20 appears to have formed a junction with the old lode further west, but we are still opening out the sides of the level to further prove it. The drawing-machine and the other machinery continue to work very well. We are going on with the work for the line of rods to Ponsonby's shaft. There is no change to report in the deep adit, driving west, on Ritchie's lode, in Berthddu.

CHIVERTON MOOR.—G. E. Tremayne, Wm. Bennetts, Dec. 20: The ground in the 105 cross-cut south is very much improved, and the men are making good progress in driving. According to the underlie of the lode in our upper level we are getting very near the lode. In the 95 fm. level north, east and west of the cross-cut, the lode is much the same in character and value as last week's report. We expect to ship two parcels of lead ore this week. There is no other change to remark since our last report.

CRENVER AND WHEAL ABRAHAM UNITED.—Wm. Kitto, Wm. Thomas, Dec. 20: Sturt's Engine-Shaft: The shaftmen are clearing the same below the 190 fm. level, and we hope to see the 200 fm. level some time this week; it is spare for driving, as the shaft is full of stuff, timber, &c.—Pelly's Engine-Shaft: The sumpmen are pushing on the plunger-lift as fast as possible, and we hope it will be put to work by the end of the week. Vivian's shaft is cleared and secured to the back of the 200, and we hope it will be available for drawing purposes by the end of the month. The levels are being cleared and secured as fast as possible. The tin pitch, in the back of the 200, still looks well. We have set another tin pitch in the bottom of the 190, between Pelly's engine-shaft and Blewitt's, making now five tin pitches, which are looking well for the beginning of a tin mine.

CWM ERFIN.—Dec. 20: The lode in the 57 fm. level, west from the engine-shaft, is 3½ ft. wide, composed of clay-slate and veins of spar, intermixed with blende. The lode in the winze below the 45, which is coming down about 14 fms. in advance of the above level, presents a similar appearance. Each of these bargains are without any lead ore. The winze is within 2 fms. of the required depth to meet the level coming forth under it, and it is thought advisable to communicate this ground, in order to take away the little ore that is gone down in the bottom of the 45, for about 11 fms. long and 3 yards deep. The lode in the 45 fm. level, going west of Taylor's shaft, carries two well-defined walls, being full 3 ft. wide, containing clay-slate and spots of copper—a very kindly end; this end is now being driven forward into a rising hill, with a full pare of men, and any discovery here would throw new life into the mine. We have two stopes working over the back of ditto, producing 6 to 8 cwts. of lead ore per fm. The driving on the caunter branch in the 45 fm. level has been suspended, the lode having died out as it got off from the main lode. The stope in the bottom of the 45, and the stope in the back of this level, have been set on tribute, at 8l. per ton; the lode yields 8 to 10 cwts. per fathom. The lode in the 32 fm. level, west of Taylor's, is 1 yard wide, composed of clay-slate and branches of spar; this level is now being pushed forward by six men, into a very kindly piece of ground. The three stopes over the back of this level have been suspended, having become too poor to pay for working. The lode in the 10 fm. level, west of Taylor's shaft, is 18 in. wide, composed of killas and decomposed quartz, intermixed with lead ore. The stope in the deep adit level is all taken away; this is principally where the next sampling will come from. We shall sample again on Tuesday next 36 tons of silver-lead ore; this was from old arches in the bottom [illegible]

DEEP LEVEL.—Dec. 21: In the deep level, south-west on Deep Level vein, the lode is about 18 in. wide, showing nice spots of lead ore, and letting out water freely. The lode in the 146 yard level, north of north shaft, on Pantyffrith vein, is full 3 ft. wide, producing stones of lead ore. Good progress is being made in driving the cross-cut south at the 174, to come under Trustee's shaft and the new vein. The ground at this point is getting much better for driving. In the winze sinking under the 120 the lode is 4 ft. wide, producing solid lumps of lead ore. The lode in the rise over the 120 is 18 in. wide, producing occasional stones of lead ore, looking promising for further improvement. The tribute pitches continue to look the same as for some time past.

DOWNGATE CONSOLS.—E. Odgers, Dec. 22: Rattenbury's shaft is now down about 8 fathoms below the 15; we are now sinking through a beautiful channel of ground both for sinking and mineral. The lode in the shaft is about 1 ft. wide; we have not taken down any lode since last reported on, but have pricked into it, and find some rich stones of copper ore coming out of the lode. We do not intend taking down the lode in the shaft for another 2 fathoms sinking, when we expect to have a good piece of lode to come down. We have four men still driving with all speed in the Trehill adit cross-cut to cut the New Great Consols and Sheba tin lodes. All the machinery is working well.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Dec. 17: All the places continue the same as we advised you on Thursday, and we are forcing them on with the utmost speed.

— G. R. Odgers, W. Bennetts, Dec. 22: We have no change to notice in the 120 cross-cut north, or in the 95 east, from our last advice. The lode in the 85 east is 2½ ft. wide, worth about 1½ ton of copper ore per fathom, with good tin, worth for the latter 8l. per fathom; this level has not yet drained the winze sinking below the 75. The lode in the 75 east is 18 in. wide, with good stones of ore, but not to value. The lode in the western end of the winze, sinking below this level, will produce 4 tons of copper ore, with tin to the value of 5l. or 6l. per fathom. The stopes above this level are the same as last reported. The lode in the 65, west from the winze sunk below the 55, is not looking so well as last reported, at present worth 2½ tons of copper ore; but this lode being subject to bunches we take very little notice of these variations. We have placed four men to stope the back of this level, which will produce fully 3½ tons per fm.

EAST WHEAL LOVELL.—R. Quentrall, Dec. 21: During the past week the mine has improved to a greater extent than during any similar period since I have been manager of the mine. On the north lode, below the 80, there are symptoms of the tin ground improving, with an easterly dip. The south lode below the 70 has improved from 200l. to 500l. per fathom, and upwards. At the Puffer, or western shaft, 200 fms. west of the north lode, sinking below the 20, the lode has improved from 25l. to 100l. per fathom, from actual assay.

EAST WHEAL SETON.—J. Vivian and Son, H. Arthur, Dec. 22: There is no alteration in this mine worthy of particular comment since last week's report. The engine and pitwork are all in good order of working, and the mine opening up rapidly.

EXCELSIOR.—George Rickard, Dec. 21: During the past week we have passed through several branches in the deep adit cross-cut level driving south towards the lodes, which consist of capel, spar, &c., containing a little tin, precisely the same character as the branches seen in the whim-shaft previous to intersecting the Thorn lode, and the ground altogether is not much unlike that the lode is embedded in. Knowing the lode to be productive for tin in the bottom of the whim-shaft, and seeing the branches containing tin in the deep adit, and the channel of ground just the same, we have every reason to look forward with the most sanguine expectations to meeting with good results upon cutting the lode, which will give backs of high and dry ground for stoping fully 40 fms. from surface.

FLORENCE AND TONKIN.—Wm. Verran, Dec. 22: In driving the 45 fm. level south on the course of the lead lode we have every promise, both from the character and bearing of the lode, of great success when further away from the copper lodes. We have put the men from the 35 fm. level south to drive a cross-cut at the 55, from Saw's shaft, so as to intersect the south copper lode, and afterwards the lead lode, which will accomplish these two objects, and thus prove these lodes at a greater depth, as well as materially shorten the distance for bringing the produce of the lead lode to the shaft. In the 35 fm. level west on the copper lode we cannot report any great improvement, but are daily expecting a change for the better. The stope above this level is still yielding good work, and as we extend west we have reason to expect a considerable improvement.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Dec. 17: We hope to complete the trip-plat, and deepen King's engine-shaft 9 ft. below the 95, by the end of next week. We are extending the drivage of the 95 east, on the north or flookan part of the lode, for the purpose of getting up and making an early communication with the winze sunk 5 fms. below the 82. The lode in the 82 east is yielding occasional stones of ore. The lode in Simons's stope, in the back of the 82, is worth 6 tons of ore per fathom. Nicholls's stope, in the back of the same level, is worth 4 tons of ore per fathom. Milford's stope is worth 3 tons of ore per fathom. The lode in the 70 east is yielding stones of ore. The lode in Williams's winze, sinking below the 70, is worth 4 tons of ore per fathom. All other points of operation are without change.

GLASGOW CARADON CONSOLS.—W. Taylor, Dec. 20: Harvey's Lode: In the 78 east, in taking down the lode we find it improved, worth 7l. to 8l. per fm.; a very kindly looking lode. We are pushing on this end to get under the winze in bottom of the 65 as fast as possible. The 52 east a good branch of ore, improving. The 45 west is worth 6l. per fathom. The 45 east is worth 12l. per fathom, and likely to further improve. We have made a communication by rise and winze from this level to the level above, opening out a good piece of ore ground, and improving the ventilation. No change in the 35 west; the lode is still disordered. The 35 east is worth 6l. per fm. The rise in back of this level is worth 12l. per fm. The stopes on this lode are worth from 10l. to 15l. per fm. The ground in the 35 cross-cut, towards Arrol's lode, has a little improved, and I hope is getting near the lode.

GORSEDD AND CELYN LEVEL.—Dec. 22: The men are now actively engaged in clearing out the adit and re-opening the Cortia Elthin shaft, as we were successful with our wooden trunks. All other points have much the same appearance as last reported.

GREAT FRON FOWNOG.—Wm. Wasley, Dec. 22: Since my last report we have bored a 2½-in. hole from the bottom of the new engine-shaft through to the roof of the Day level; the hole was 8 yards deep, but we have worked away about 2 yards, leaving about 6 yards more of the shaft to sink to get to the roof of the level. All the water is now going down through the lode, so that we have no water to pump with the engine, and have, therefore, nothing to do but to draw the stuff and send the men up and down. I shall now put all the men in the shaft to run it down as fast as possible. All the surface works are progressing well, and will soon be in good working order.

GREAT LAXEY.—R. Rowe, Dec. 16: The men are getting on well with the sinking of the engine-shaft; it is now down 6½ fathoms below the 220, and the lode still worth about 60l. per fathom. In the 220 end there is a change, indicating that we are now getting near to the slide, and the lode has suddenly turned off to the hanging, or east side, which is usually the case under similar circumstances; we hope shortly to report that the water is cut down from the sole of the 220. The sump recently commenced to sink below that level has a lode 9 feet wide, worth 130l. per fathom. The 210 end is not so good as last reported, now worth 50l. per fathom; here we are also getting into the influence of a slide known to be not far ahead, and which scarcely ever fails to disorder the lode for a short distance on either side. In the 200 we continue to "slipe" off the lode from the side of the level, and find it large and productive, varying in value from 120l. to 140l. per fathom. I am unable to report any improvement in the 190 end, which is at present poor. The 180 end is worth 80l. per fathom, and a part of the lode still standing off to the hanging, being wider than the full width of the level. The 165 end has improved; lode now worth 80l. per fathom; and a sump lately started to sink below this level is worth 140l. per fathom. The 155 so far has not turned out so well as it promised to do, still we are not without hope of finding a richer lode as we drive ahead. In the 145 cross-cut the ground is very hard, and should there be a lode before us we may yet have some fathoms to drive to cut it. In the south ground I cannot report anything new since last report.—Dumbell's: The engine-shaft is now sunk 8½ fathoms below the 155, and I am happy to say that the lode is again steadily recovering its productiveness as we sink; it is now worth fully 80l. per fathom. The 155 south has also improved, and now worth 60l. per fathom. The same level north has just passed through a slide, and we are now getting into the lode on the other side of it; so far as already seen it appears likely that we shall soon be into productive ground, and this is pretty well confirmed by the fact that we have a sump sinking from the level above—about 6 fathoms ahead of the present end—in which the lode is worth 80l. per fathom. The 140 end north continues about the same as last reported, worth 40l. per fathom, with a large part of the lode left standing on the hanging side. The 125 and 110 ends are both unproductive. The 60, driving south, is worth 50l. per fathom. We are steadily pursuing the work for the new reservoir at Agneash, and the vessel with a cargo of cement from London has arrived. At Glenroy the engine-shaft is now sunk 10¼ fathoms below the 37, in which the lode is 3 ft. wide, regular, and of a promising nature, but at present only yielding stones of copper and blende. We are endeavouring to communicate a sump for ventilation between the 25 and 37 before resuming the driving of either of those levels.

GREAT NORTH LAXEY.—R. Rowe, Dec. 17: Since my special report, of Sept. 5 last, the work for which the new capital was designed, at the April general meeting, has been energetically pushed forward, as will be seen by the following statement. It will be remembered that after much discussion, in April, it was considered that the final success of the mine rested upon the carrying down of the north shaft, and making it the chief medium for following the ore ground into depth equal to that at which Great Laxey began to be profitable. For reasons well known—connected with a negociation between the directors and the Crown, as to a reduction in the royalty—I was not able to commence the extended work before the beginning of September last; from that time to the present we have unceasingly pressed forward the north shaft at every point we have been able to get at, and at this moment there are only 8 fathoms of ground to be cut between the bottom of the shaft (below the 38) and the rise in the 73 fm. level; and below the 73 the shaft is also made complete to within 8 fathoms of the 96; I expect, therefore, that this shaft, which was standing in the 38 in April last, will by the next general meeting be holed to the 96 fathom level, and ready to proceed to the 110, where, from present appearances, it will commence its career as the main shaft of the mine, into fresh depth, in a large and productive lode, resembling more than ever that of Great Laxey. In the present 110 end the lode is 5 ft. wide, composed of blende, copper, and lead, worth of the latter about 12 cwts. per fathom; this end is now within 8 fms. of where the north shaft will come down, and I think this will convince you, and set at rest the question as to the suitability of the north shaft for the future of the mine. The 96 end is driven 22 fms. north of the line of the north shaft; the lode is 3 ft. wide, of a very promising character, and worth 1 ton of lead per fathom; in this level we have driven through 12 fms. of good ore ground, so far untouched. In the 84, the sump sinking, as designed for the north shaft, is worth 1 ton of lead per fathom. In the south levels—the 60 and 27, we have yet good hopes of a discovery. The 60 some time ago passed through a small pipe of ore, but at present the lode is small, and of no value. In the 27 we have a lode 3 ft. wide, worth close upon ¼ ton of lead per fathom; this being in entirely new and rapidly rising ground is an exploratory object, in my opinion well worth pursuing. We have 35 tons of lead at surface, and partly dressed, but are hindered by the erection of the new crushing mill, which we expect to have finished by the second week in the new year.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Dec. 21: The men are making good progress with the adit cross-cut, towards the large lode, but we have no alteration to remark in the nature of the rock.

GREAT ROCK.—J. Kemp, Dec. 23: We are very busy engaged fixing lift at the 23, bringing down main rods, &c., therefore there has been nothing done in the shaft for some days in consequence. This will soon be completed, after which we shall be able to proceed with the sinking without interruption. The rise in the back of the 12, east of the shaft, is much the same as last reported, but does not improve as I would expect from the promising appearance the lode presents. The tribute bargain in and about the 6 fm. level is producing some pretty good lode. We have a very severe frost here; I do not know that I ever remember it so severe.

GREAT ROYALTON.—Thomas Parkyn, Dec. 21: In the 22 we are now in 2 ft. in King's lode this morning, which contains rich tin indeed. We got home to the north wall on Saturday, as I wrote you, when the bucket-rods parted in the lift, which took us all the day to put to rights; and yesterday, when Capt. Pascoe was underground with me, the men were just in a part of the lode, and now we are in 2 ft., the lode looking most promising indeed. Some stones rich for tin are now sent up. I cannot say how large the lode is, but from the appearance I think it is equal in size to where we have it in the 16, which is from 10 to 12 ft. wide, and in some places it is more than that. It will take some days to cut through the lode. I will write you again in a day or two to say how we progress, and its value, &c. We are supplying the stamps from the adit level; here the lode is 12 ft. wide, worth a little over 1 cwt. of tin to the 100 sacks, or 10 tons in weight, of lodestuff. I should remark here that this is what is left by the old miners, as all the best and richest part of the lode has been taken away, as I have reported before. This lode makes large and rich bunches of tin, and these have been taken away at the adit, and some in the 16; but in the 22 we have all virgin ground, and I think it will yield immense quantities of tin. I shall be in a position in three or four days to report you some good news. We shall sell tin next week, but as yet it is impossible to say how much. We shall not be able to clean up half we have stamped out. This is patent to any practical man, the floors not all being complete for the small or frame tin, and all being new, &c.; but still this will come all right enough. The lode in the 22 is being heaved by a cross-course, or we should have had it before, and the ground appears rather disturbed with cross-courses and slides for the moment. This piece of ground is between King's and the north lode, and we have some cross-branches as well, which I think will account for the ground not being properly settled.

Dec. 17: *Telegram*: We have this moment cut King's lode in the 22. Particulars by post.

GREAT SOUTH TOLGUS.—John Rodda, Dec. 21: The lode in the 140 rise, over No. 3 cross-cut, west of Lyle's engine-shaft, is still worth 10l. per fathom for tin. In Tom's pitch, over No. 2 cross-cut, the lode is worth 17l. per fathom. The 125, east of Boddily's cross-cut, on the north part of the lode, is improved, and worth 9l. per fathom. The stope in back of this level is worth 9l. per fm. We have not drawn the stuff from the rise on the south part of the lode this week, so as to ascertain its value by sample.

GREAT WHEAL LOVELL.—C. Bawden, Dec. 22: The lode in the 15 fathom level east is worth 20l. per fathom; the same level west is worth 12l. per fathom. The lode in the sink below the 15 is worth 25l. per fathom, and improving. We are compelled to abandon this sinking for the time, in consequence of water. The engine shaft is being sunk as fast as possible, and the ground has much improved. I expect to have the lode in the shaft in the course of another week; this will drain a good section of tin ground, when we shall be in a position to resume the sinking on the course of tin gone down below the 15. We hope to commence stamping tin in the beginning of the new year, and in a few weeks after shall be in the market with a parcel of tin, which for the depth will, probably, exceed that from any mine which has taken place for a long time past.

GWYDYR PARK.—W. Smyth, Dec. 20: At Sutton's shaft, 8 fathoms west, there is no particular change since last report. In the western end of the stope, in the back of this level, we have again broken into old workings, and the men are at present employed in clearing it out. In Vuchesias new adit, driving west, the lode is 2 feet wide, composed of spar, sulphur, blende, and good stones of lead ore, but no change of importance since last report. In Smiths' Shop end no lode has been taken down since last report; the end is very wet.

HAMMETT.—S. Bennett, Dec. 22: There is no change worthy of notice in the adit east on the north lode, nor in the north cross-cut from deep adit.

HOBB'S HILL.—S. Bennetts, Dec. 22: The sinking of the shaft at Tinner's-lane, on the cross-course, has not so far drained the eastern bottoms, but probably will do so as the sinking progresses. In the deep adit some of the lode is being broken on trial; it varies from 2 to to 2½ ft. wide, and contains tin.

LEEDS AND ST. AUBYN.—John Curtis, Dec. 19: Setting Report of the 17th inst.: The 20 to drive west of Wilson's engine-shaft by four men, at 8l. per fm.; lode 18 in. wide, producing tinstuff just sufficient to pay for stamping. Two men stoping the back of this level, at 1l. 10s. per fathom; lode 2 ft. wide, worth 4l. per fathom. The 20 to drive east of Wilson's engine-shaft by four men, at 2l. 10s. per fathom; lode 2 ft. wide, worth 4l. 10s. per fathom. Two men stoping the back of this level, at 1l. per fathom; lode 2 ft. wide, worth 4l. per fathom. Kendall's flat-rod shaft to sink below the adit by nine men, at 11l. 10s. per fathom; lode 2½ ft. wide, with good stones of tin in it. The deep adit level to drive east of whip-shaft by four men, at 2l. 10s. per fathom, and by extending this level about 25 fms. further we shall intersect a standard lode, from which we have raised large quantities of tin. The stopes west of the winze, below the adit level, by four men, at 1l. 10s. per fathom; lode 2 ft. wide, worth 2l. 10s. per fathom. The 10 to drive west of Wilson's shaft by two men, at 2l. 5s. per fathom; lode 18 in. wide, worth 1l. 10s. per fm. In the tribute department we have 12 men, varying in tribute from 10s. to 15s. in 1l.

MINERA UNION.—J. Nicholls, Dec. 22: Brabner's Shaft: The lode in the 100 yard level south is worth 1 ton of lead per fathom. The pitch in the back of this level is also worth 1 ton of lead per fathom. The pitch in the back of the 80 yard level north is worth 12 cwts. of lead per fathom.—Boundary Shaft: The lode in the 50 yard level north has improved since last report, now worth 5 cwts. of lead per fathom, and very promising for a further improvement.—Fine Shaft: The lode in the 40 yard level north is 2 ft. wide, of a congenial character, and contains occasional stones of lead. The tribute pitches continue to yield their usual quantities of lead.

MOUNT PLEASENT.—W. Wasley, Dec. 22: The men are making good progress with driving the level from the top of the old down hill west of the boundary shaft and, the ground looking a little more favourable for ore than it was. The tributers working near Bright's shaft are getting a fair quantity of ore, and their pitches looking very promising.

NEW CROW HILL.—A. Kent, T. Trelease, Dec. 20: We are still pushing on the 100 cross-cut at a good rate, through a beautiful channel of ground, but have not yet made any further discovery of lode. We think it advisable to continue the driving in the present direction for this month, if we do not make any discovery in a shorter time; the ground is so good at present that we are driving 2 fms. per week, and standing without timber.—North Lode: We are pushing on the level on this lode at a good rate, but do not see any particular change; but we are daily expecting to see it, as we have again costeaned and cut the lode further down in the hill, where it shows a nice gossan back to it; but below this part it is disordered at surface, but as the end is now nearly under the pit, where we have again lately cut it, we expect to see a change in the end soon.

NEW GREAT CONSOLS.—Richard Pryor, Thomas Bennetts, H. Tregoning, Dec. 19: The different stopes throughout this mine continue without much alteration. The weather having very much improved, all the surface work is progressing favourably.

NEW TRELAWNY.—J. Truscott, Dec. 17: The engine-shaft has been sunk 2 fms. 1 ft. 6 in., making the depth 7 fms. below the 40, where the lode is 2 feet wide, composed of quartz, intermixed with mundic. The branch of lead continues without alteration to notice; the ground continues favourable, and we are making good progress in sinking. To drive west at the 40 fm. level, 5 fms. stent, by four men, at 8l. 10s. per fathom, measured 2 fms. 4 ft.; the lode is 1 ft. wide, composed principally of prian and mundic, with a little lead occasionally. The 30 fm. level having been driven over 30 fms. from shaft through a large mundicy lode without any particular change in character, I have thought it advisable to put these men down with the men driving the 40 west to see what change an extra 10 fms. may have on the lode.

NEW TRELEIGH.—Samuel Michell, Dec. 21: Our operations at the 30, on Nicholson's shaft, are going on satisfactorily, but have met with nothing worthy of notice for the past few days. Water is pressing very strong in the cross-cut, which lead us to believe we are getting near No. 2 lode. The lode in the end driving west at this level is large, and from its character we look forward to something better shortly.

NEW VICTORIA (Ashburton).—W. George, jun., Dec. 17: We have set two men to drive 6 ft. further east at this (96) level, at 2l., so as to get a little beyond the cross-cut north before we commence to drive south towards the south lode. We intend placing four men at this point, to hurry it on as quickly as possible. We shall commence driving south some part of next week. In the 86 east the men are making very fair progress; from the change in the ground on the north side of the lode we are expecting an improvement.

NEW WHEAL TOWAN.—Richard Pryor, Dec. 21: The lode in the adit level, driving west on the tin and copper lodes, continues much the same as reported on last week.

NORTH ALLT-Y-CRIB.—Charles Williams, Dec. 21: No. 1 lode: The western level upon this lode is without any change to notice, yielding its usual quantity of rich ore per fathom. The north and south lode is improving, and now worth from 20l. to 30l. per cubic fathom for lead ore, and is more than 8 ft. wide. The excavation for foundations of engine and crusher is being proceeded with as fast as possible, with a full complement of hands, and I hope to have the masons in a week or nine days time. The widening of the adit level for the tramroad is progressing satisfactorily.

NORTH CROFTY.—Joseph Vivian and Son, William Thomas, Dec. 22: We are making fair progress in driving the 220 west towards the tin ground. Petherick's shaft will be holed to this level within one month. The lode in the 208, west of Petherick's shaft, is very large, worth altogether about 20l. per fm. We are at present driving on the north part, so as to reach the winze sinking under the 196 as early as possible, when the lode will be fully cut through, and its value correctly ascertained. We expect a communication with the end and winze in about one month or six weeks. The lode in the 196 end west is worth 8l. per fathom for tin and copper ore. The tribute pitches, both east of Praed's shaft and west of Petherick's shaft, continue to look very well.

NORTH FOWEY CONSOLS.—P. Rich, Dec. 22: We are progressing very satisfactorily in the adit level. We have hung tackle over the winze sinking below the deep adit level; now down 10 ft., and set to four men, 5 fms., at 3l. per fm.; the lode in this winze is fully 3½ ft. wide, a splendid-looking lode, and improving every foot we sink, with every indication of approaching a course of ore.

NORTH POOL.—Dec. 19: I have set Ballarat shaft to sink below the 52 by nine men and three boys, at 25l. 10s. per fathom. The 40 is set to four men, at 6l. 10s. per fathom. The lode contains at present some black copper ore. I am daily looking for something good here.

OLD GUNNISLAKE.—F. Phillips, Dec. 21: The lode is larger than I anticipated in sinking; we are not through it yet, but shall get through as we go down. It is producing a large quantity of stuff—saving work for tin. In the cross-cut there is no change.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, Dec. 17: Sump Shaft: We are making fair progress in sinking below the 140; the ground being favourable. The lode in the 140 fm. level west is worth 12l. per fathom. The stope in the pitch in the back of this level produces 10 cwts. of black tin per cubic fm.; the lode is 12 feet wide. Nothing of any importance yet intersected in the 130 fm. level south; the ground is favourable for cross-cutting. The lode in the 120 fm. level east, on north lode, is worth 12l. per fathom; very wet and troublesome for driving. In the 100 fm. level east the branch reported as being driven on here seems to widen as it gets off the cross-course, and to produce fair quality tinstuff. We are still clearing and securing the 55 fm. level south cross-cut, and making good progress therein. The lode in the 47 fm. level east is worth 20l. per fathom. In the 47 fm. level we are still intersecting branches producing tin.—Cobbler's Shaft: The lode in the 130 fm. level west produces

occasional stones of tin, and lets out much water. The lode in the 120 fm. level west is worth 25*l.* per fathom.—North Mine: In the 90 fm. level west the lode is worth 10*l.* per fathom. In the 80 fm. level west the lode is worth 10*l.* per fathom. In the 70 fm. level west the lode is worth 12*l.* per fathom. In the 60 fm. level east the lode is worth 10*l.* per fathom. In the 60 fathom level west the lode is worth 16*l.* per fathom. In the 55 fm. level east the lode is worth 12*l.* per fm. In the 55 fm. level west the lode is worth 20*l.* per fathom. In the 47 fm. level east the lode is worth 20*l.* per fathom. In the 47 fm. level west the lode is unproductive.—Cardozo's: The lode in the bottom of this shaft, sinking below the 10 fm. level, is worth 12*l.* per fathom. We sold this day at Carvedras 13 tons 15 cwts. 0 qrs. 6 lbs. of black tin, at 77*l.* per ton, as per tin bill.

PEN'ALLT.—Capt. Glanville, Dec. 19: In the level driving east of No. 4 crosscut the lode continues to be worth from 25*l.* to 30*l.* per fathom; and that in the rise in the back of this level the lode is worth 30*l.* per fathom. A very large pile of ore has been partly dressed by the patent German dressing machinery, from which between 15 and 20 tons of lead are ready for market, but it is not proposed to make sales until towards the end of January, by which time the quantity will be greatly enlarged. An addition has been made to the machinery in the shape of the Cornish round bundle, which will be at work by Monday.

PENHALE UNITED.—Richard Pryor, H. Bennetts, Joseph Pryor, Dec. 21: The tutwork bargains throughout these mines are without much change to notice, with the exception of the lode in the 80, driving north of Hall's shaft, which has very much improved in its appearance and character; and, judging therefrom, we fully believe that it will shortly resume its former value. The tribute department is looking just the same as usual, and every effort is being made to get about another parcel of lead for the market.

PENHALE WHEAL VOR.—W. H. Martin, Dec. 20: The engine-shaft men, in sinking below the 140 for bearer and cistern, are making fair progress. The ground in the 130 cross-cut north is much harder, mixed up with capels, consequently our progress is not so good; this we expected, as it is nearing the lode. Our machinery is working very well.

PERKINS BEACH.—Edward Davies, Dec. 21: The 20 west drivage is proceeding rapidly. There is a great change for the better in this ground, which already lets out water; strings of spar, with a little ore, are appearing, and in time will unwater the two principal ore points we at present have above. On No. 2 caunter we begin to sink to-morrow, hoping to prove the continuance of the run of ore which was so valuable to former workers above this level.—Pump Sump: This ore is still very good, and I am erecting a pump in the bottom to throw water into the winze that communicates with the 20. In addition to our excellent pipe we have discovered a flyer running south-east, and having followed it for a few days, find it yields nice stones of ore.—Walker's Vein: The rise is progressing rapidly, now yields some ore, and looks very promising. We prefer Walker's winze, worth 2 tons to the fathom, standing until unwatered by the 20, as our monthly sales of ore are being made from the pump-sump alone. Since my last report we erected a shed (45 ft. long by 18 ft. wide, roofed with tile) over the dressing-floors, which enables the dressers to continue their work in all weathers, except severe frost.

PRINCE OF WALES.—J. and W. Gifford, Dec. 22: Watson's shaft is progressing very favourably, which we hope to complete to the 90 by the end of this month, when we shall at once commence a cross-cut towards the lode. In the 77 east we are taking down the north part of the lode, which, so far as seen, is improving in size and quality both for tin and copper, worth for the former 14*l.* per fathom, and for the latter 8*l.* per fathom. In the 77 west the lode is 2½ ft. wide, worth 6*l.* per fathom. We have resumed driving the 65 east by two men, at 9*l.* per fathom. The winze in the 65 west is worth 15*l.* per fm. In the 55 west, on No. 2 north lode, we are cross-cutting north to see if any more lode is standing in that direction. The stope in the back of the 77 east is worth 8*l.* per fathom. The stope in the back of the 65 west is worth 12*l.* per fathom. Two stopes in the back of the 65 east are worth on an average 10*l.* per fathom each. The stope in the back of the 55 east is worth 8*l.* per fathom. The stope in back of 45 west is worth 6*l.* per fathom. We hope to commence operations on the silver lode on Tuesday next, and from the appearance of the lode in Queen's shaft, where we shall begin driving, there is every reason to expect large deposits of silver ore.

PRINCESS OF WALES.—T. Foote, G. Rickard, Dec. 21: We have again met with another hard floor of capel at the engine-shaft, which has disordered the branch referred to in our former reports. We are pushing on the sinking as fast as we possibly can, and hope speedily to get through this floor.

REDMOOR.—T. Bennetts, Dec. 17: Setting Report: The 25 fm. level to drive west, by four men, at 5*l.* per fathom; the lode is worth 6*l.* per fathom. The lode in the stope in the bottom of the 25 fm. level, east of the footway-shaft, is worth 7*l.* per fathom; set to eight men, at 45s. per fathom. A rise in the back of the 25 fm. level, set to two men, at 3*l.* per fathom; the lode is worth 3*l.* 10s. per fathom; this is to communicate with the 12 fm. level for ventilation. The lode in No. 1 stope in the back of the 25 fm. level is worth 7*l.* per fathom; set to eight men, at 45s. per fathom. The lode in No. 2 stope is worth 10*l.* per fm.; set to four men, at 3*l.* per fathom.

REDMOOR.—F. Bennetts, Dec. 22: The lode in the 25 fm. level west is worth 6*l.* per fm.; from the dip of the ground in the stope above we expect an improvement in this end. There is no change in the stopes to notice.

REPERRY.—T. Parkyn, Dec. 22: The 25, north lode, both east and west, is greatly improved since my last report, both ends now yielding rich work for tin. We have one stope east of the cross-cut, which is also turning out good work. The south cross-cut is letting out a great deal more water, and we are daily expecting to intersect the south lode. The stamps are working well, and the tin coming from the stamps is very satisfactory.

RHYDTALOG.—Jas. Dunkin, Dec. 22: In sinking the engine-shaft we have met with a cross branch or slide in the east end of the shaft underlying west; this branch has disordered the lode for the present, but in sinking through the same I find the lode again forming regular, producing lead, and I have no doubt in sinking a foot or two regain its former value; the ground is everything that could be desired for producing lead ore. The 15, driving west, is improving in appearance as we continue to open out, and producing good stones of lead ore. The 15 north is still of the same character as before reported, and letting out more water. The frost has set in very hard here, but so far we can get on very well with our pumping, &c.

ROARING WATER.—H. Thomas, Dec. 20: Grady's lode, west of Gilliman's shaft, is much improved, and the indications good; it is now composed of peach, rich stones of copper ore, and quartz; the lode is now better defined, with regular walls on the north and south. There is a large quantity of water flowing from the end, and I think we are near a very important change.

ROCHE CONSOLS.—Thos. Parkyn, Dec. 21: We have had favourable weather for building, and the masons are making good progress in building the engine-house, and should the weather continue as favourable, the masons will get the house up in the time they are bound by their contract—eight weeks from the date of commencement; and early in the ensuing year you will be in the market with good sales of tin. All the surface work is being pushed forward.

SOUTH CARN BREA.—Wm. Rich, Dec. 22: The lode in the stope below the 120, east of engine-shaft, is improved, now worth 15*l.* per fathom for tin. The 130 fm. level east is worth 6*l.* per fathom. The lode in the bottom of the engine-shaft towards the western end is worth 20*l.* per fathom. The ore appears to be dipping west; we shall start off a drivage, west of shaft, on the course of the lode in a week or two. We have sampled (computed) 22 tons of copper ore; this has been raised from the engine-shaft in sinking the last 14 ft.

SOUTH CONDURROW.—J. Vivian and Sons, H. Abrahams, Dec. 22: In the 82, west of King's shaft, the part of the lode on which we are driving is gradually improving, being now worth about 9*l.* per fathom. The 71 west is also improving, now worth, for a width of 3½ feet, about 30*l.* per fathom, with the largest portion of the lode still standing to the north unexplored; this end is now within about 6 fms. of the winze sunk from the 61, where the rich rocks of tin were met with, and the further sinking of which was prevented by an influx of water. The rise in the back of the 71, east of the cross-cut, is worth about 10*l.* per fathom. The 61 west is again improving, being now worth about 10*l.* per fathom. The 61 east, on the north branches of the tin lode, is worth, for width of 10 ft., full 80*l.* per fathom. In the 51 north we are still cutting through the tin lode, and find the quality of the tinstone gradually improving. The 40 east, on No. 1 north branch, is worth about 10*l.* per fathom. In the 20 west, on Wood's lode, we are driving by the side of the lode, in order to make better progress towards the ground parallel with the tin ground on the other lode. In the 10, east of Fraser's shaft, we continue to drive by the side of the lode. In the deep adit level, east of Fraser's shaft, the lode is 3½ ft. wide, and worth about 15*l.* per fathom. The stopes throughout the mine maintain their value.

SOUTH FOWEY CONSOLS.—F. Puckey, Dec. 19: The cutting of the plat in the 45 is completed, and we are now forcing on the cross-cuts, driving north and south of the engine shaft, with all possible speed, by a full pare of six men in each end. The cross-cut north of the shaft is already driven 4 fathoms, and we expect to intersect the first lode by the end of next month. The stratum of ground in this level is very congenial for the production of copper ore, and is favourable for progress.

SOUTH HERODSFOOT.—W. Goldsworthy, Dec. 22: In the 100 fm. level, driving north, the lode continues small and much the same as for some time past. The ground in the cross-cut east is very easy for progress, and congenial for the production of lead.

SOUTH MERLLYN.—Dec. 22: Vickers's Shaft: The lode in the sump, sinking below the 90 south, is now 18 in. wide, producing 3 cwts. of lead ore per fm. The lode in the 100 yard level is now 2 ft. wide. No other change to notice. We have ready for delivery 30 tons of lead, computed, when sold, at 28 tons.

SOUTH VAN.—J. Richards, Dec. 22: The drawing-machine is completed, and is now working admirably, and will very much facilitate the sinking of the shaft, with very little extra cost. The sinking of the shaft is being pushed on as fast as possible; my intention is to sink the same to the 30 fm. level, and, if the lode is not then intersected, to drive a short cross-cut to cut the same, as I think this depth will be a reasonable one for a good discovery of lead, judging from the indications at surface, or shallow adit level. There is a change already in the bottom of the shaft, caused by some strings of spar and mundic, which I consider a favourable indication. There is no important change in the lode driving east to notice since my last, any more than a branch of spar containing lead and copper ore crossing the level, which I regard as a very promising feature.

ST. JUST AMALGAMATED.—Richard Pryor, Thomas Gundry, N. Bartle, Dec. 20: Saveall's Lode: The lode in the 100, driving west of engine-shaft, is 3 ft. wide, worth 4*l.* per fathom. The lode in the 90, driving west of shaft, is worth 7*l.* per fathom. The lode in the 70, driving east on the south branch, is producing saving work for tin. The lode in the 50, driving east of shaft, is worth 4*l.* per fathom.—Owl Lode: The lode in the 40, driving north of Reddipper shaft, is 2 ft. wide, worth 10*l.* per fathom, and improving. The lode in the 30, driving east of Reddipper shaft, on Wheal Dower lode, is yielding saving work for tin. The lode in the 20, driving east of cross-cut, is worth 6*l.* per fathom. There is no change to notice in any other part of the mine.

TANKERVILLE.—Arthur Waters, Dec. 22: In the 102 fathom level, west of Watson's shaft, fair progress is being made in going forward on the hanging-wall side of the great lode. We shall shoot the footwall side down to the full width of the ore course at our convenience. The value of the lode here is the same as for the last week or two. We hope to commence the 102, east of shaft, in the course of another fortnight. The winze below the 92, under Brown's shaft, continues to go down in a good run of ore; the lode is now 4 to 5 ft. wide. All the stopes below the 74 are yielding their usual quantities of lead. The 74, west of cross-cut, on the old lode, progresses slowly, owing to hard ground; we believe, however, that our patience will be rewarded by the success sought after. The winze below the 42 shows nothing new since our last report, then in a strong oxey lode. The rise in the 35 has improved a little for lead this last week. The 21, going west to Watson's, appears to be getting into branches and strings of carbonate of lime and stones of lead ore, of a very promising character indeed, and which we think are connected with a strong lode, perhaps before the present end. The new shaft is squared down to adit, and the men are engaged cutting ground for drains to carry off the surface water, which comes in some 6 fathoms down to 15 fms. from the top, in considerable quantities, and has hitherto much retarded progress. Our endeavour is to have a dry shaft below adit. In the quarry above the road, and just where Tankerville lode should crop up, the men in getting stone have come upon lodestuff, out of which solid lumps of lead ore, 7 lbs. to 10 lbs. weight, have been taken yesterday and to-day. The engines are all doing good duty. The weather is so severe that our dressing department is all but ice-bound, and will, we think, be quite shut up to-morrow. We shall go on breaking and drawing lead to surface as usual.

TERRAS.—M. Rickard, Dec. 21: The 20 east, on Edwards's lode, is not so large as when reported on last week, but continues to yield excellent work for tin. The stopes in back of the 20 east, on Edwards's lode, have much improved in the past week, both in size and quality, and with every prospect of a further improvement; we are extending the stopes eastward towards the bunch of tin passed through in the level, and our raisings will be necessarily small at this point for the present, for this reason, our not having sufficient winding power (a hand windlass only), and this has been principally employed in draining the influx of water occasioned by the constant and heavy rains that we have had in the past week or two, and if we have a continuance of the heavy rains we are sadly afraid that it will materially interfere with our working in this part of the mine, until we can get up machinery, and what is being got ready, which will require, I fear, some three or four weeks to complete. The cleaning up of the western shaft has been suspended, in consequence of our having reached the water. The lodes in the different levels present very promising appearances, but we must not expect courses of tin left open and in sight by the old men, whose object was to pick out every available portion of the lode that they considered the most productive for tin. The deep level for the tramway to the large elvan is being proceeded with as fast as possible, and, as stated in our last report, is very important.—Great Elvan Lode: The stopes having been carried forward on this lode quite to the point to which our predecessor (Capt. Edwards) had had the surface burden removed, we have of necessity extended the uncovering of the lode, and are now working down the elvan near the surface, and although less productive for tin near the surface, nevertheless the produce is satisfactory, and we need not inform you that as depth is reached the richer the stone is for tin. Our surface operations are progressing satisfactorily, the state of the weather considered.

TREWETHA.—T. Foote, Dec. 21: We are making good progress in driving the cross-cut east at the 74 towards the lode; we shall push on this as fast as possible, and expect to cut a good lode when reached. I am pleased to say the lode in the 62 north is improving—in fact, a very promising end, and worth at present 6 cwts. of lead per fathom, and likely to improve. No other change in this part of the mine to notice.—South Mine, Ward's: The lode in the 90 south is a very kindly lode, composed of fluor-spar and lead, yielding of the latter full 6 cwts. per fathom. I would here remark that we are opening up a good piece of ore ground at this level, and but little is taken away by stoping; we shall place some men to stop the ground shortly. The lode in the end driving north at this level is producing a little saving work, yet a kindly lode; the ground is rather troublesome for progress. The lode in the 73 south is looking very kindly, and opening up a good ground for stoping. The same will apply to all the ends driving in this part of the mine up to the 43; also the 53, north of Sims's winze. The stopes, on the whole, are quite equal to what they have been for some time past. One in the back of the 53, south of Sims's winze, is worth full 30*l.* per fathom. This stope has turned out well during the past fortnight, and will enable us to increase our sampling on Saturday next, we hope, 5 tons, which will make the quantity 55 tons. We calculate this to be the richest parcel of ore, say nothing about the quantity, sampled from this mine for many years past, and we are pleased to say that our prospects are good. We shall at once draw out the water from the 90 to the 100, or bottom of the shaft, and drive the 100, and hope the time is not far distant when we shall be sinking the engine-shaft, which has been so many years idle, and open up a good and lasting mine. The engines and all the machinery are working well, and although the water has increased, we are able to master it comfortably without connecting the side lifts, which we have never been able to do at this season of the year.

VAN CONSOLS.—T. Corfield, Dec. 22: The lode in the 30, east of the western shaft, is without alteration of importance, but looks kindly for lead. The sinking in Gundry's shaft is proceeding as usual; it is now down between 10 and 11 fathoms below the deep adit, and the ground continues good for progress. In the deep adit we have cleared in the north level about 8 fathoms this week, but the ground now again requires timbering. We have found some good stones of lead in the back.

VANNIN.—W. H. Rowe, Dec. 20: It is very gratifying that we are not likely to meet with hard or tedious ground in driving the deep adit cross-cut. The vein unexpectedly met with runs within a very few degrees of the direction I had decided upon driving, and unless it changes will be of considerable benefit as regards time and cost. The price per fathom at present is only 3*l.*, and the cross vein of itself is very kindly, being composed of killas, flookan, mundic, and spots of lead.

VIRTUOUS LADY.—H. Horswill, Dec. 22: The sinking of the new shaft progresses very favourably, and if we do not communicate to adit this week I do not think there will be any doubt about it next week. In the rise in the adit against the shaft there is a leader of solid ore 2 ft. wide, the other part of the lode being gossan and spar. I never saw the ground in the cross-cut south more congenial for mineral than it is now. In Metherill's level the lode produces very good stones of ore, and I never saw this place looking more favourable for a large deposit of ore than it does at present. Another pitch has been let on the tin lode this week to four men, at 13s. 4d. in 12., the takers paying all costs; both of the pitches producing good work for tin. Machinery progressing as fast as weather will permit.

WEST CARADON.—N. Richards, Dec. 20: Marina's Shaft: Clymo's lode, in the shaft sinking below the 55 is improved, now worth 1½ ton per fathom. On Allen's lode, at the 55, west of cross-course, the lode seems to be getting clear of the cross branches, now worth 1½ ton per fathom; the same level, east of cross-course, is yielding stones of ore, but not sufficient to value. The same remarks will apply to the lode in the winze sinking below the 42, east of cross-course; in the same level, driving east of cross-course, the lode will yield 2 tons per fathom. In the winze sinking below this level, west of cross-course, the lode will yield 2½ tons per fathom. In the 42 cross-cut south we are just now passing through a hard bar of ground, consequently our progress is rather slow at present. We are urging on the surface work and the dressing for our next sampling as fast as the weather and nature of the ground will admit.

WEST FEDW.—John Paull, Dec. 19: Surface: Since operations were commenced in June last I have to report that the necessary buildings for a 36-inch steam-engine have been erected, and the engine is now being put together as fast as possible, and will be ready for pumping and winding in a month from this time. A spacious smiths' shop and carpenters' shop have been put up, also a storehouse for the general materials required in mining, together with two cottages (close to the works), suitable for the two enginemen, and where some miners may also be accommodated. These things complete the surface requirements of the mine for the present, and the underground works should now be pushed forward with the utmost vigour.—Underground: A perpendicular shaft, about 65 fms. south from the engine, has been laid out for the development of the two south lodes. It is sunk 7½ fms. from surface, and (as soon as the engine is complete for pumping, &c.), should be carried down to 25 fms., and the lodes then cross-cut to and explored both east and westward. The prospects of opening out a productive mine at this point alone are exceedingly good. To the north of the engine, some 30 fms., a shaft is sunk 8 fms. on the north side or wall of the main or Fedw lode, and sinking will be resumed immediately the pumping-machinery is finished. At surface the lode is 15 ft. wide on the south side of the shaft, composed of clay-slate, quartz, and a fine-looking gossan, altogether of the appearance and character from which, at a moderate depth, good deposits of lead ore may be expected to be found. An old shallow adit level has been cleared and enlarged, and tramway laid down for about 50 fathoms, to the Fedw lode, which here also is 15 to 20 ft. wide, of the character lastly described. This level, in going westward on the lode, will be over 20 fms. deep at the shaft, and take six or seven months to drive up to it by six men. This is important to be done, to ventilate the shaft, and enable it to be sunk on for a 12 fm. level (and others), below the adit, and thus admit of opening up this large lode rapidly. I may mention that the operations in Fedw Mine, on this lode, are only 60 fms. from the West Fedw boundary, and that the 10 and 23 fm. levels are being driven west towards it, in a large lead-bearing lode, which has every appearance of continuing into West Fedw ground. On the northern side of the sett a deep adit cross-cut is taken up, and driven south 22 fms.; it is driving by six men, and should be continued so, being a most splendid trial, and will ultimately cut all the lodes in the property at about 100 fathoms below the surface. The company's grant is very extensive, and contains at least five well defined lodes, which we believe, on being properly opened up, will make a large and productive lead mine.

WEST GODOLPHIN.—J. Pope, jun., Dec. 21: The caunter lode in the 20 fm. level, driving south-east of Pressure shaft, is 3½ ft. wide—a fine-looking lode, yielding some very rich stones of grey copper ore, and worth about 20*l.* per fm. for tin. In the same level, driving north-west of Pressure shaft, the lode is worth about 20*l.* per fathom. The lode in Vivian's shaft, sinking below the shallow adit level, is worth 8*l.* per fathom. The lode in the sump-shaft, cutting down below the deep adit level, is not looking quite so well, worth about 6*l.* per fathom for the length cutting down (9 feet). We have cleared and secured Thomas's shaft to within about 3 fathoms of the back of the 10 fathom level. The other parts of the mine, including the tribute pitches, are without change to notice.

WEST JEWELL.—John Mayne, Dec. 23: At Greene's engine-shaft the sump-men have cut the bearer-bobs for cistern, and also the bearer-holes for sinking lift, and fixed the bearers. We have not got on quite so fast as we anticipated, in consequence of the ground in the north part of the shaft being very hard. The men are getting on very well in clearing and securing the deep adit level; and as it is being done we are setting pitches.—Freeman's Shaft: The 28, driving west of this shaft, is without alteration since last reported on. In the 17, driving west, the lode is worth 6*l.* per fathom. In the winze in bottom of this level the lode is worth 8*l.* per fathom. Our tribute department, on the whole, is looking much the same as usual, and as the deep adit level is being cleared and secured we are setting more pitches. All operations are being carried on as fast as possible.

WEST MARIA AND FORTESCUE CONSOLS.—William Skewis, J. Donnal, Dec. 22: West Maria Lode: No change of any importance in Willesford's shaft, sinking below the 71 fm. level. The lode in the 71 east is worth 25*l.* per fathom. The lode in No. 1 stope, in the back of this level, is worth 12*l.*, and in No. 2 stope, 30*l.* per fathom. There is no lode taken down in this level, west of shaft, since last report. The lode in the 60 east is very promising, and is now worth 12*l.* per fathom, with prospects of an improvement. The lode in the stope in the back of this level is worth 12*l.* per fathom; and in the stope in the bottom of this level, west of shaft, it is worth 7*l.* per fathom. The lode in the rise in the back of the 50, east of shaft, is worth 15*l.* per fathom. No change in any other part.

WEST PANT-Y-GO.—S. Harper, Dec. 21: There is no change to report in the two cross-cuts, which are proceeding as fast as possible. The same remark applies to the tribute pitches. The water in the engine-shaft is very quick.

WEST TANKERVILLE.—Arthur Waters, Dec. 22: Wood's Engine-shaft: Everything is in good working order for draining the Wood and Cornish veins to the 60, which is at present the bottom of the mine, and we expect to have all the water out to that level by Monday next. The 48 cross-cut, mentioned in previous reports as going east through the Wood vein, is not yet through the lode, but continues to open into a good mixture of lead-stuff, and which has now uncovered the latter from top to bottom of cross-cut. There is character about this discovery, for not only is there rich lead to be seen, but the ore occupies a regular division of lode—that is, runs in a course parallel to the walls of the country rock, from which we infer that what is seen in the present cross-cut is not a mere patch, but the centre of a run of productive ground which is standing probably behind the spar for some length out of the distance the 48 is driven south of shaft—73 fms. This question will be developed as the said cross-cut penetrates towards the footwall of the lode, which will be daily. The stopes above the level named are just as last reported on. We have found some very extensive open workings above the 28, adjoining Lawrence's shaft. The bottom of those are at present full of water. This being so, and remembering that the late company worked the ground below the 18 by the aid of hand-pumps, and that the said ground is, taking a southerly dip into consideration, just in a line with the 48 cross-cut, we shall not be surprised if the discovery just made at that level leads into the continuation of Lawrence's great bunch of ore. The other points in the mine are without change to notice since our last report. The masons are doing but little at present. Most of the winding and crushing machinery, with boiler, are on the mine and at the station.

WEST TOLGUS.—Dec. 21: The new lift has just been fixed in the cistern below the 115, and is working very well, and we hope to begin sinking again on Monday morning next. Six of the shaftmen are put to drive the 115 cross-cut south, and from the increase of water and the appearance of the ground we shall be daily expecting to cut the lode. The other six of the shaftmen are employed in putting the ladder-road in order. The lode in the 105 end west is small and poor, and the ground very dark and unkindly. The lode in the 95 west is also small and poor, but a more kindly lode than in the 105. The lode in the 95 end east is the same as last reported—small, and letting out plenty of water. The lode in the 65 end west is nearly the end wide—a strong lode, with spots of ore, but nothing to value. The stopes throughout the mine are the same as reported last setting-day, looking very well. There is not much alteration in the cross-cut at Richard's shaft; one small branch has been passed through since leaving the north lode. There is a pretty deal of water coming from the end, which plainly shows there is another lode before us.

WEST WHEAL TREMAYNE.—S. Roberts, Dec. 20: We are getting on favourably with the rise against Park Toll shaft; it is up between 2 and 3 fathoms now, and if the ground prove favourable for rising, we hope to hole in three weeks. The lode at present in the rise is small. We have suspended the driving of the 20 for the present, in consequence of not having air for the rise and end at the same time. The water is increasing much in the shaft; there are 9 fms. of water in it to-day, and still rising. We have completed the erection of the whim.

WHEAL AGAR.—E. Rogers, Dec. 21: The lode in the engine-shaft is increasing in size, and looking more promising, worth 12*l.* per fathom. In the 140, west of the engine-shaft, the lode is also improved from last week, now worth 15*l.* per fathom, and the ground much more easy for driving. Other parts of the mine are without change to notice.

WHEAL BULLER.—J. Inch, Dec. 20: Since my last report we have broken some good stones of tin in the bottom of Hocking's shaft, better than I have seen for some time past; the lode at this point is greatly improved in appearance. The end and stopes at Stevens's shaft are looking fully as well as they were last week. There is nothing new in any other part of the mine. Next Friday being our setting-day, we will send you a full report.

WHEAL CREBOR.—John Goldsworthy, Dec. 20: I beg to hand you my report of this mine showing the work done since the last general meeting (Sept. 13), with present and future prospects. The 117 fm. level, west of Kelly's shaft, has been extended 5 fms. 5 ft. 10 in., the lode proving to be 4 to 5 ft. wide, composed of capel, quartz, mundic, and a portion of the lode produced 2 tons of copper ore per fathom. In the present end the lode will produce occasional good stones of yellow copper ore; although not rich, nevertheless the same is of a very kindly appearance, the stratum being a compact light blue clay-slate, such as where rich copper lodes are found. The 120 fm. level, east of Cock's shaft, has been extended 6 fms. 2 ft. 7 in.; the lode varying in size from 2½ to 4 ft. wide, composed of quartz, prian, capel, mundic, and copper ore, producing in places 2 tons of copper ore per fathom; the lode in the present end is 2 ft. wide, and produces rich stones of copper ore, with an improved appearance for the production of the same. The 96 fm. level cross-cut south has been extended 6 fms. 3 ft. towards the Buctor lode; the stratum is strongly charged with mineral. By the increase of water, and judging from the same, I am of opinion we are near a branch or lode. I consider this to be a most important point, for should there be a rich lode intersected in this cross-cut it would be in whole ground to surface; this would open up a good and lasting property at once. Rich's rise in the back of the 84 fm. level east has been put up 4 fms. 4 ft., and communicated to Bray's pitch; the lode produced 4 tons of copper ore per fathom. The 57 fm. level has been driven west of Moyle's rise 5 fms. 1 ft. 6 in.; this level has opened up tribute ground. A rise in the back of this level has been put up 2 fms. 4 ft.; the lode varying in size from 3 to 3½ feet wide; 2 fms. of this rise produced 2½ tons of copper ore per fathom. The same is now set on tribute, and will produce 2½ tons of copper ore per fathom. Rich's rise in the back of the 72 fm. level has been put up 3 fms.; the lode is 2 ft. wide, and will produce ½ ton of copper ore per fathom; the same presents indications of an early improvement. This is a point of importance, there being no level over this rise from surface.—Tribute Department: The pitches throughout the mine are improved on the whole. A pitch in the bottom of the 108 fm. level will produce 2½ tons per fathom, worth 9*l.* per fathom. One in the back of the 96 fm. level east will produce 3 tons per fathom, worth 9*l.* 10s. per fathom. Two pitches in the back of the 96 fm. level, west of Cock's shaft, one will produce 2½ tons per fathom, worth 8*l.*, and the other worth 30*l.* per fathom. Three pitches in the back of the 84 fm. level, east of Cock's shaft, will produce on an average 2½ tons per fathom, worth 8*l.* per fathom. A pitch in the back of the 57 fm. level, east and west of Moyle's rise, will produce 2 tons per fathom, worth 7*l.* per fathom. A pitch in the back of the 48 fm. level, west of Cock's shaft, is worth 20*l.* per fathom. Although the tutwork bargains have not proved so productive as the indications warranted at the last general meeting, we have fair prospects before us in the 117 fm. level, west of Kelly's shaft, this being whole ground for many hundreds of fathoms. The 120 is also a point of interest, there being a long run of unexplored ground in that direction. The 96 fm. level cross-cut is a most important drivage, there being an increase of water, which is a favourable indication of a lode or branch being near ahead. Should we meet with a lode in this cross-cut, good results may be realised. The rise in the back of the 72 fm. level is another point where we may fairly look forward to meet with favourable results. Since the last general meeting we have made many repairs to the machinery, put in several new main rods in Cock's shaft, with necessary fittings, put in upwards of 40 fms. of skip and ladder road, repaired the angle bob at the bottom of downright, put in new balance-bob at surface, and other necessary repairs. I am pleased to say the plant throughout is now in good repair and working order. We hope to sample at the usual time (should the weather be favourable) not less than 90 tons of the usual quality ore.

WHEAL FRIENDSHIP. Dec. 19: Bennett's Lode: In the 170 fathom level, west side of the main cross-course, we find the branches referred to in our last report to be of no importance, and we have to-day put the men to cut in north at the west side of the said cross-course, where a few feet will give it a trial. No lode has been taken down in the 150 or 140 fm. levels. No alteration in any of our stopes worthy of remark. In the 80 fm. level cross-cut no change has been met with.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Dec. 17: We have no change to notice in any place in this mine since our last report. We will send you a full and detailed account for the meeting. We are hauling fully as much tinstone as for some time past, and of equal produce.

WHEAL KITTY (St. Agnes).—William Polkinghorne, S. Davey, Dec. 17: New Shaft, Pryor's Lode: The shaftmen are still engaged in cutting plat. In the 118, driving east of shaft, the lode is worth for tin 7*l.* per fathom. In the 118, driving west of shaft, the lode is worth for tin 17*l.* per fathom. In the 106, east of shaft, the lode has been thrown south by gossan, but we think from present appearances we are near it, and hope to speak more positively in our next. In the 106, driving west of shaft, the lode is 4 ft. wide, and worth for tin 25*l.* per fathom. In the 94, driving east of shaft, the lode is producing a little tin, but not enough to value. In the 94, driving west of shaft, the lode is worth for tin 12*l.* per fathom. In the 82, driving west of shaft, the lode is worth for tin 7*l.* per fathom. In the winze sinking below the 82, west of shaft, the lode is 4 ft. wide, and worth for tin 12*l.* per fathom.—Old Lode: In the 82, driving west of Holgate's shaft, the lode is poor.

WHEAL MARY ANN.—Joseph Harris, James Stevens, James Skeat, Dec. 22: In the cross-cut in the 250 Clymo's shaft is extended 10 fms. towards the lode. The lode in the 240 north is 1½ ft. wide, worth 5*l.* per fm. In the same level south the lode is 2 ft. wide, worth 4*l.* per fathom. There is no change to notice in the 230 north since the meeting. In the same level south the lode is 3 feet wide, worth 12*l.* per fm. In the 210 north the lode is 3½ ft. wide, worth 2*l.* per fm. In the 200 north the lode is 2 ft. wide, worth 7*l.* per fm. In the 190 north the lode is 3 ft. wide, worth 8*l.* per fathom. The stopes and pitches continue to yield their usual quantities of ore. We have this day sold our two parcels of silver-lead ore. No. 1 (computed) 5½ tons, to Messrs. Stock and Co., at 22*l.* 15s. 6d. per ton, and No. 2 (computed) 45 tons, to Messrs. Burry Port Smelting Company, at 21*l.* 12s. per ton.

WHEAL SPARNON.—Wm. Tregay, Dec. 17: We are still clearing the adit level, consequently there is no change to notice.

WHEAL UNY.—Wm. Rich, Matthew Rogers, S. Coade, jun., Dec. 17: The 160 fm. level, east of engine-shaft, is worth 7*l.* per fathom. The same level west is worth 8*l.* per fathom. The rise in the back of the 150 east is worth 7*l.* per fathom. The 150 west carries stones of tin. The 140 end east is worth 8*l.* per fathom. We have begun to sink a winze in the bottom of this level in a lode worth 20*l.* per fathom. The 130 east is worth 10*l.* per fathom. The 120 is worth 12*l.* per fathom. The 110 end is very wet, and is worth 9*l.* per fathom. The 100 east is looking very promising to improve, it now yields excellent stones of tin. The rise in the back of the 80 is worth 10*l.* per fathom. The 60 east is worth 12*l.* per fathom; and the 45 east is worth 15*l.* per fathom. We are rising in the back of the adit, with the view to make a skip-shaft; the lode in the rise referred to is worth 8*l.* per fathom.

FOREIGN MINE.

PESTARENA UNITED.—Thomas Roberts, James Mitchell, Dec. 17: Aquavite Department: The 55 end, driving north, continues the same as last week, yielding 10 tons per fathom, at 10 dwts. per ton. The 55 end, driving south of sump-winze, yields 5 tons per fathom, at 15 dwts. per ton. The 46 end, driving south, 3 tons per fathom, at 1¼ oz. per ton. No. 1 stope, in back of the 46, yields 6 tons per fathom, worth 2 ozs. per ton. One part of this stope has been communicated to the sink in bottom of the 33. The 33 and 23 ends, driving south, are both poor at present. The stopes in bottom of the 33 yield 8 tons per fathom, at 18 dwts. per ton. The lode in the 23 end, driving north, has improved since last week, yielding now 6 tons per fathom, at 12 dwts. per ton. And stopes in bottom of this level yield 5 tons, at 15 dwts. per ton. The cutting down of whim-shaft under the 23 is progressing.—Boundary: The end north at the 20 yields 5 tons per fathom, at 12 dwts. per ton:—Peschiera: The end driving north of cross-cut in the 33, on No. 2 lode, is poor at present. The stopes in back, behind this end, yield 6 tons per fathom, at 2 ozs. per ton. The end driving north in this level, on No. 5 lode, yields 5 tons per fathom, at 12 dwts. per ton. The stopes in bottom of the 75 yield 8 tons per fathom, at 1¾ oz. per ton.—Val Toppa Mine: The end driving on the side lode, north of the second cross-cut west, in No. 3 level, yields 9 tons per fathom, at 8 dwts. per ton; and the end south of this cross-cut 8 tons, at 7 dwts. per ton. The rise on the side lode, east of main level, yields 7 tons, at ½ oz. per ton. No. 2 level, the end driving north of third cross-cut, on the new lode, yields 12 tons per fathom, at 10 dwts. per ton; and the end driving south of fourth cross-cut, on this lode, now yields 10 tons per fathom, at 10 dwts. per ton; and the end driving north of this cross-cut 6 tons, at 8 dwts. per ton. The end driving north, on the western part of the great quartz lode, gives 8 tons per fathom, at 12 dwts. per ton. No change to report in the stopes. In the past week the weather has been more favourable for our surface-works. The sleading of the ore to the cart-road has been resumed, and the carting of it will be commenced to-morrow. Considerable progress has been

made on new works on hand at the establishment. At Pestarena Mines we have made some progress at surface, but not so much as we would wish for, owing to the snow and ice on the ground. We melted on the 15th, on account of the present month, 7326 grammes of gold, equal to 235 ozs. 13 dwts. 17 grs., and consigned the same in five ingots to Carlo Menozzi.

[For remainder of Foreign Mines, see to-day's Supplement.]

THE PACIFIC MINING COMPANY.—The committee who were appointed to enquire into the affairs of the Pacific Mining Company (Messrs. A. G. Kitchin, the Chairman, Bennett, Courtney, Key, and Peake) held their first meeting on Wednesday, and are to meet daily (only adjourning for the Christmas holidays) till their labours are completed, so that they may place their report before the shareholders at the earliest possible moment.

EXTRAORDINARY DISCOVERY OF LEAD ORE AT THE EAST LLANGYNOG MINE, MONTGOMERYSHIRE—SOLID RIBS OF LEAD WEIGHING FROM 1 CWT. TO 5 CWTS. EACH.—A company has just been formed under the Limited Liability Acts for the purpose of more efficiently developing this property. It is expected that the shares will very soon rise to a high premium, as the mine is already self-supporting. The agent says he can have 40 or 50 tons of ore ready for the market by about the middle or end of January. Advertisements and reports appear in another column of the Journal. Stones of the ore weighing from 2 cwts. to 6 cwts. each may be seen at Messrs. J. Taylor and Co.'s, Mining Exchange, South King-street, Manchester.

CHAMPION.—The lode from whence the massive copper was obtained is holding good as the sinking continues. All the other lodes are equally good as last reported. The property, as will be seen from the prospectus in another column, comprises many square miles of ground, and is secured from the several landowners on leases of twenty-one years, at a royalty of one-fifteenth, with the exception of one small sett, which is held at one-twelfth. For nearly two years the property has been privately worked under tack-notes, and large mineral veins having been proved in all directions through the different setts, they decided upon purchasing the Creetown, Lachantyre, and Dallash Mines, with their buildings and machinery, and thus obtaining the required facility for successfully developing the property. The company has now been constituted on the limited liability principle, and every confidence is entertained that the enterprise will prove remunerative to those concerned. It is understood that the share list has been well filled, and will shortly be closed.

PLYNLIMMON.—This mine has been recently inspected by an independent authority, who computes the different points of operation at a greater value than reported by the manager. The continuous length of ore ground already opened is described as being unequalled in Cardiganshire, while as yet there appears no probability of reaching its end, the levels being now in a good lode, and likely to open up inexhaustible courses of lead. The machinery being erected, and in good order, there is nothing to do but to break down the ore and send it to market. The machinery is quite capable of dressing any amount of ore. The report concludes by stating that the reserves of ore, estimated at 25,000*l.*, are undervalued.

MINING AND MACHINERY IN THE WEST OF DEVON.—It must be gratifying to the labouring community of the neighbourhood of Tavistock to find that their great mineral field, offering so many natural advantages for genius and enterprise, has at last been selected for such operations as are now being carried out at a little mine justly named "The Gem," an excellent view of which can be obtained from the train whilst it is passing over that gigantic structure so much admired by all travellers—the Grenofen Viaduct. Here will be seen all the busy operations of tin-dressing, the principal adjunct being a patented invention by Mr. Chas. Collom, mining engineer, of Calstock, this being one of a series of improvements undertaken by that gentleman; and, judging of the merits of this first production, the mining public have reason to anticipate an entire revolution in the dressing of metallic ores, particularly tin, and a reduction of at least 75 per cent. in the cost, thus enabling mines to work which could not otherwise. The construction of this machine has been adapted and arranged so as to fill the place of ordinary round buddles, making use of the same gear to work them. The construction is a circular inclining table, revolving horizontally, surrounding which are covers or receivers. The ore to be operated on is supplied similar to that of an ordinary buddle, and is carried round through a regular flow of clean water, thus carrying away the waste and other lighter substances, while the ore is deposited in two receivers—first, the lower; and then the most valuable, the head. All the appointments are so successfully arranged as to carry out all these operations without intermission. Comparing this machine with the ordinary reck it is capable of doing for 1s. more than can be done with the reck for 12s., and in less than one-twelfth the time. Therefore, a machine employed only working over the waste which otherwise would not pay, and taking stuff of which there are such vast burrows, containing from 3 to 7 lbs. of tin to the ton, and working 10 tons per day, at a cost of 1s., the value of each machine is not over-estimated at from 400*l.* per annum.

COAL MARKET.—The fresh arrivals this week number 150 ships The cold, stormy weather produced an active demand for house coals, and a large business has been transacted, prices closing at an advance of 6d. on last week's quotations. The supply of Hartley's has been rather in excess, and prices in consequence declined 1s. per ton. Hetton Wallsend, 19s.; East Hartlepool, 18s. 3d.; Lambton Wallsend, 18s. 3d.; South Kelloe Wallsend, 17s. 3d.; Hetton Lyons Wallsend, 15s. 9d. Unsold, 2½ cargoes; 20 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in November was 908,644 tons, against 756,571 tons in the corresponding month of 1869, showing an increase of 152,073 tons. The particulars are—From the Northern Ports, 437,302 tons; Yorkshire, 56,995 tons; London, 6052 tons; Liverpool, 67.777 tons; Severn Ports, 271,086 tons; and Scotch Ports, 69,432 tons. The increase was—Northern Ports, 118,389 tons; Yorkshire, 27,572 tons; London, 1844 tons; Scotch Ports, 29,761 tons. The decrease—Liverpool, 5312 tons; Severn Ports, 20,181 tons. Total, Jan. to Nov., 9,808,841 tons, against 8,965,460 tons in corresponding months last year.

CHEMICALS AND MINERALS.—Messrs. J. Berger Spence and Co., of Manchester, Dec. 22.—Soda: Cream caustic enquired for, and at 12*l.* 10*s.* for 60 per cent.; and white, at 13*l.* to 13*l.* 5*s.* Ash unchanged, at 1 13-16d. to 1⅞d. per degree. Soda cystals lower, at 4*l.* to 4*l.* 2*s.* 6d. Bi-carbonate, at 9*l.* 15*s.* to 10*l.*, and 14*l.* 15*s.* for refined. Salt cake, 3*l.* Glauber salts, 3*l.*—Nitrate of soda has undergone a slight advance, and ranges from 15*l.* to 15*l.* 10*s.*—Potash: Muriates are scarce, and 9*l.* 15*s.* to 10*l.* is quoted for 80 per cent. f.o.b. Prussiate: Yellow, 11¾d. to 1*s.*; red, 1*s.* 9d. to 1*s.* 10¼d. Chlorate of potash, 10½d.—Salpetre is quiet, but at the latter part of the week there was a better feeling. Foreign, 28*s.* to 30*s.* Refined, 24*s.*—Alum: Home consumption, demand fair. Loose lump, 6*l.* to 6*l.* 5*s.*, and in export barrels, 7*l.* Ground, at 7*l.*—Ammonia: White and grey in rather better enquiry for abroad, at 16*l.* to 16*l.* 10*s.* Brown sulphate firm, at 14*l.* to 14*l.* 5*s.* Muriate, 23*l.* to 24*l.* Carbonate, 6d. per lb. Sal-Ammoniac, 42*s.* to 43*s.* firsts, and 41*s.* seconds.—Iron Salts: Green and rusty copperas are dull, at 52*s.* to 54*s.* Dry, at 52*s.* Chloride of Iron, 6*l.* Prussian blue, 1*s.* 6d. to 2*s.*—Copper Salts: Sulphate of copper, 23*l.* to 24*l.*—Arsenic: At 62.13*s.* to 7*l.* 5*s.* fine powdered.—Acid: Tartaric firmer, 1*s.* 3¼d. to 1*s.* 3½d. Oxalic, 7¾d. to 8d.; sulphuric, 3*l.* 5*s.* to 3*l.* 15*s.*—Magnesia: Epsom Salts, at 4*l.* 10*s.* to 4*l.* 17*s.* 6d. for refined.—Oils: Olive firm, at 48*l.* to 49*l.* Spindle and loom oils, good quality in fair demand. Pure white Norwegian cod liver oil, 6*s.* 6d. to 7*s.* per gallon.—Pitch: Market quiet.—Benzole: No alteration, 30 per cent. 2*s.* 3d. to 2*s.* 4d. Disinfectants: Patent, at 5*l.* per ton; carbolic, at 10*l.* China-clay, 22*s.* per ton. Pyrites very firm, at 6d. to 8d. per unit; calcined Spanish, 42*s.* R.C.—Lime Bleaching powder firm, at 9*l.* to 9*l.* 10*s.* Super-phosphates: High percentage: quality is now largely enquired for, for next year's delivery; ordinary, 4*l.* 5*s.* to 4*l.* 10*s.*; mineral, 60*s.* to 65*s.*; Estramadura, 1*s.* 2d. per unit. Manganese is not in such good demand, at 75*s.* to 80*s.* for 70 per cent.—Iron Ore: Hematite prices tend upwards, and firm at 16*s.* to 18*s.*; oolitic in good demand, at 6*s.* 9d. to 7*s.* 6d. in Staffordshire.

EAST WHEAL LOVELL.—(*Special Report*).—I have again to-day inspected the above mine. The following is my report thereon, founded upon a careful examination of the points under operation:—The engine-shaft may have been sunk a foot or two since my report of the 17th ult., and a little of the western end taken down, clearly proving the continuous dip of the granite at an angle of about 45° east at the deepest point sunk, which has brought this once rich deposit of tin to a mere point of a wedge, consequently the bottom of the shaft is of but little value. There is a little tin standing against the granite in the eastern end of the stopes, for about 6 or 7 fms. in height; this being a mere skirting of tin cannot last long. The 80 fm. level is driven 3 fms. west of the engine-shaft; the end is in hard granite, and of no value. They have just commenced to sink a winze below the 70, on a pipe of tin about 2 or 3 fms. in advance of the 80 *fm.* level end, and in which the lode is fully 8 ft. wide, and worth for 12 *ft.* long 190*l.* per fathom. The stope over the level, on the same deposit, is worth 15*l.* per fathom. The western winze, which is said to be 2½ fms. below the 70 fm. level, has been suspended for several month past; it being full of water prevented my seeing it. In the western part of the mine the new shaft is sunk 5 *ft.* below the 20 fm. level, in which the lode is worth 20*l.* per fathom. There has been nothing done in the 20 fm. levels east or west since my last report. In conclusion, you will see by my remarks that the bunch of tin which has been so exceedingly rich is almost exhausted, and for some time to come their principal returns must be from the western deposits.—WILLIAM PASCOE; *Camborne, Dec.* 14.

At the Royal Exchange Assurance Corporation meeting, on Wednesday, a dividend of 4 per cent. was declared for the half-year, making, with 1 declared at midsummer, a total distribution of 25 per cent. for the year.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Exhausted Coal Fields, No. IV.; Collieries in North Durham, their Workings and Machinery; Forest of Wyre Coal Field (H. Beckett); Coal-Cutting Machinery (F. Hurd); Inequalities of Rating in Stourbridge Union; Steam Ore Stampers (Willoughby Brothers); Testimonial to Mr. Jehu Hitchins (J. Y. Watson); New Zealand Quartz Crushing and Gold Mining Company (J. Simpson); Taquaril Mine; Terras and East Terras Mines—Improved Dressing Machinery, *illustrated* (J. Darlington)—Self-Acting Calciner (*illustrated*)—Precious Metals and Precious Stones (Prof. J. Morris)—Foreign Mining and Metallurgy—Foreign Mines Reports—Patent Matters, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, DEC. 23, 1870.

COPPER.	£	s.	d.	£	s.	d.
Best selected ..p. ton	73	0	0-		—	
Tough cake and tile	71	0	0-		—	
Sheathing & sheets..	73	0	0-	74	0	0
Bolts	74	0	0-		—	
Bottoms	74	0	0-	76	0	0
Old	62	0	0-		—	
Burra Burra	73	0	0-		—	
Wire.....per lb.	0	0	10-		—	
Tubes	0	0	10¼-10¾d.			

BRASS.	Per lb.
Sheets	7½d. 7¾d.
Wire	7d.-7¼d.
Tubes	9½d.-10½d.
Yellow Metal Sheathing	6¾d.-7d.
Sheets	6¼d.-6⅜d.

SPELTER.	Per ton.
Foreign on the spot	£17 10 0-18 0 0
,, to arrive ..	— - -

ZINC.						
In sheets	£21	0	0-22	0	0	
QUICKSILVER (p.bottle)		12	0	0		

TIN.						
English blocks ..	£130	0	0-		—	
Do., bars (in brls.)	131	0	0-		—	
Do., refined	135	0	0-		—	
Banca	130	10	0-131	0	0	
Straits	130	10	0-131	0	0	

TIN-PLATES.*	Per box.					
IC Charcoal, 1st qua.	1	5	0-	1	8	0
IX Ditto, 1st quality	1	12	0-	1	14	0
IC Ditto, 2d quality..	1	5	0-	1	6	0
IX Ditto, 2d quality..	1	11	0-	1	12	0
IC Coke	1	2	6-	1	3	6
IX Ditto	1	8	6-	1	9	6
Canada plates, p. ton..	12	10	0-14	10	0	
Ditto, at works	13	0	0-14	0	0	

* At the works, 1s. to 1s. 6d. per box less.

IRON.	Per ton.					
Bars Welsh, in London	7	2	6-		—	
Ditto, to arrive	7	0	0-		—	
Nail rods	7	10	0-		—	
,, Staffd. in London	7	15	0-	8	0	0
Bars ,, ditto	8	2	6-	9	0	0
Hoops ,, ditto	8	15	0-	9	0	0
Bars ,, at works..	7	15	0-	8	0	0
Hoops ,, ditto	8	2	6-	8	5	0
Sheets, single	9	10	0-11	0	0	
Pig No. 1, in Wales	3	15	0-	4	5	0
Refined metal, ditto..	4	0	0-	5	0	0
Bars, common ditto..	6	5	0-	6	7	6
Do. mrch. Tyne or Tees	6	10	0-		—	
Do., railway, in Wales	6	0	0-	6	5	0
Do., Swed. in London.	10	5	0-10	10	0	
To arrive	10	0	0-		—	
Pig, No. 1, in Clyde..	2	12	0-	3	0	0
Do. f.o.b. Tyne or Tees	2	9	6-		—	
Do. Nos. 3, 4, f.o.b. do.	2	6	6-	2	7	0
Railway chairs	5	17	0-	6	0	0
,, spikes	11	0	0-12	0	0	
Indian Charcoal Pigs, in London, p. ton..	6	5	0-	6	10	0

STEEL.	Per ton.					
Swed., in kegs (rolled)	12	10	0-13	0	0	
,, (hammered)	13	0	0-14	0	0	
Ditto, in faggots	15	0	0-		—	
English, spring	17	0	0-		—	

LEAD.	Per ton.					
English Pig, com.	18	2	6-		—	
Ditto, LB	18	5	0-18	7	6	
Ditto, WB	19	10	0-20	0	0	
Ditto, sheet	19	0	0-		—	
Ditto, red lead	20	10	0-		—	
Ditto, white	28	0	0-30	0	0	
Ditto, patent shot	21	0	0-		—	
Spanish	17	15	0-		—	

REMARKS.—Notwithstanding the near approach of the Christmas holidays, and the fact that the general attention is usually devoted at this season into other channels, so that metals are to some extent apt to be neglected, there has during the past week been more doing, and more enquiry has existed for some descriptions of metals than is customary during the last weeks of the year.

COPPER.—There is a positive present improvement in the position of this market, and the values of the official rates of the various descriptions have been advanced 3*l.* per ton. This altered state of the market arises in the main from a demand which has sprung up in Birmingham during the last few weeks for cartridges and other war materiel, and it is also to be attributed in some measure to the firmness displayed by the holders of Chili produce. It appears that the market has passed through that period of depression involving low prices to which we referred in the Journal of May 20 last as being likely to continue from that date up to about the close of the year; and that, according to the statistics therein given, including a period of ten years, sufficient reliable data is afforded to form a precedent for future guidance. Upon these grounds—that copper almost always rates higher during the first six months of the year than the latter part, we may partly assume that we are now entering upon a more favourable time for this metal, and that the present advance will not only be maintained, but may possibly be improved upon. Chili bars are quoted at 64*l.*; Burra Burra, 73*l.*; tough, 71*l.*; and manufactured, 4 by 4, 73*l.* to 74*l.*

YELLOW METAL sheathing has been advanced ¼d. per lb., and is now quoted 7d. The demand both for manufactured copper and yellow metal is not so good as could be desired. Charters for the first fortnight in November amounted to 3800 tons—2100 tons bars, 1700 tons ore and regulus.

IRON.—Since our last week's report there is no noticeable change in the position of this metal, which continues dull. The home trade is usually very quiet at this time of the year, and scarcely any fresh orders are likely now to be given out before the turn of the year. Prices will, doubtless, remain easy, and for immediate specifications it is probable that some slight concessions might be submitted to. Scotch pigs, 51*s.* 3d. cash; markets closing tolerably firm. Shipments for week ending Dec. 18, 1869, 10,060 tons; shipments for week ending Dec. 17, 1870, 8835 tons; decrease since Dec. 25, 1869, 8352 tons. Swedish iron is in fair request, but the stocks having been cleared out, no transactions have taken place.

LEAD.—Sellers have not altered their prices since last week. The amount of business doing is limited. Buyers see nothing in the present prices to offer any inducement to extend their purchases beyond immediate requirements. Good soft English lead can be now purchased at 18*l.* 2*s.* 6d. to 18*l.* 5*s.*

QUICKSILVER.—Sellers have advanced the price still further, and now quote 12*l.* per bottle. Stocks being light, it is thought by some that even higher prices may shortly be announced.

SPELTER remains inactive, but quotations have not undergone any change. The principal stock of Silesian is held for much higher prices.

TIN.—A good deal more activity has been observable this week, particularly as regards foreign, and prices have stiffened up to 130*l.* 10*s.* to 131*l.* for Straits and Banca. The market closes with a hardening tendency, on account of the late deliveries proving satisfactory.

TIN-PLATES.—Orders for army purposes have given employment to the works, and prices are, consequently, firm.

IRON TRADE—(Griffiths' Weekly Report).—The fears of a further European rupture which arose out of the Black Sea question are gradually subsiding, and, although the prospects of an early termination to the Prusso-Gallic war are still unfavourable, the iron trade is steady, and looks likely to maintain its present position over the coming quarter-day. It has been stated in some quarters that a reduction in price might be expected at the Preliminary Meeting which takes place next week; the nearer, however, we approach the day of the Birmingham meeting we are more and more inclined to think that there will no change in the price of iron for the next quarter. The market here having improved a little this week, and the class of business doing indicates that buyers have better orders in reserve. The rail market continues quiet, only very small orders being given out for home consumpton. The stoppage of so many ironworks in Prussia, France, and Belgium has much extended the area of buyers of English iron, and on this account prices here have been better sustained since we last wrote.—Cornhill, London, Dec. 24.

COPPER TRADE.—Messrs. James and Shakspeare—Smelters have paid 12*s.* 9d. by private contract for a moderate quantity of furnace material, and many importers are now standing out for 13*s.* per unit, although if such a figure were paid it would almost necessitate a further advance in the manufactured article. Chili bars have been in fair demand at 63*l.* 15*s.* to 64*l.* 5*s.* for Lota, Urmeneta, and other good ordinary brands, whilst special marks have realised 64*l.* 10*s.* to 65*l.* per ton, in the latter case with a slight extension of prompt. Lota ingots have been taken at 68*l.*, and Urmeneta (double refined) at 70*l.* in Liverpool. On Dec. 20 telegrams came to hand advising charters in Chili during the first fortnight of November for about 3890 tons pure, of which 2000 in bars and ingots, the remainder in ore and regulus; the advices for the corresponding period of 1869 were 1984 tons pure. Australian has been in excellent request, and large sales effected, chiefly of Wallaroo, at 72*l.* to 72*l.* 10*s*, cash; 73*l.* to 73*l.* 15*s.*, with long prompt. Burra being scarce has sold at 73*l.* cash, and holders now ask 10*s.* per ton more. On Tuesday last the smelters declared an official advance in English of 3*l.* per ton, making tough and tile 71*l.*; selected, 73*l.*; sheets, 76*l.*; this step was chiefly brought about by the demand for raw sorts, which has for some time past been exceedingly heavy, a large quantity being required in Birmingham for the manufacture of cartridge metal, a trade which, during the last year or two, has been gradually increasing, and now holds a very important position in the market.

Messrs. Vivian, Younger, and Bond.—A good business has been done both in Australian and in English raw sorts, chiefly for home consumption and export, the former descriptions are a trifle weaker at the close, whilst the latter are very firm at annexed quotations. Manufactured continues neglected. On the 20th inst. the smelters advanced their prices 3*l.* per ton all round, making tough 71*l.*, best selected 73*l.*, and Indian sheets and sheathing, 75*l.*, but they are not eager sellers of tough or best at their new official rates. The quotation for yellow metal sheathing was also raised to 7d. Chili bars have not participated to the same extent as other sorts in the general improvement, the highest prices obtained being 64*l.* 10*s.* for common and 65*l.* for best brands, at which there are now rather sellers. A parcel of regulus has been done at 12*s.* 9d., and holders now ask 13*s.* On the 17th inst. the cablegram in advance of the Chili mail of Nov. 16 came to hand, advising charters for the fortnight of 3760 tons fine copper—2080 tons in bars and ingots, and 1680 tons fine in ores and regulus.

Contrary to usual experience at this time of the year, the MINING SHARE MARKET has been in a very active state this week, a good demand has existed for several mines, and a large business transacted in East Lovell, Prince of Wales, Wheal Grenville, Tankerville, West Tankerville, Providence Mines, New Lovell, Great Wheal Vor, New Beldon, West Maria and Fortescue, Perran Wheal Virgin, East Grenville, East Caradon, Marke Valley, South Frances, Pacific, Sweetland Creek, Don Pedro, Taquaril, &c. The standard for copper ores advanced 1*l.* on Thursday.

East Lovell shares opened firm at 28, but on Wednesday declined to 27½; on Thursday opened at 28½, rose to 30½, and leave off 32½ to 35. An improvement has taken place in the western shaft, where the lode is worth 100*l.* per fathom for the length of it, and improving.

Prince of Wales shares have been in great demand, and leave off 30*s.* to 32*s.* 6d. An arrangement has been made to work the silver lode discovered in the south part of the sett, and great results are expected at a trifling cost, and without risk. On Tuesday next operations will commence, and it is expected in silver ore; and if this proves to be the case there will, no doubt, be plenty of excitement in the shares, and a great rise in price. The 77 east has improved to 14*l.* per fathom for tin, and the 77 west is coming into good copper.

Devon Great Consols, 95 to 100; Bedford Consols, 2¾ to 3¼. Bedford United, 20*s.* to 25*s.*; at the meeting a call of 5*s.* per share was made. Caldbeck Fells, 17*s.* to 19*s.*; Chiverton Moor, 2½ to 2¾; Cook's Kitchen, 18 to 19; Drake Walls, 23*s.* to 25*s.*; East Wheal Grenville, 2 to 2¼; Great Laxey, 17½ to 18; Great Lovell, 1½ to 2. Great Wheal Vor, 3 to 3¼; at the quarterly meeting, held on Thursday, the accounts showed a loss on the quarter of 1217*l.* 0*s.* 11d., and a balance against the mine of 56*l.*, which was carried forward to the debit of the next three months. The tin sold on Dec. 20 was 37 tons 7 cwts. realising 2691*l.* 13*s.* 9d. Hingston Down, 7*s.* 6d. to 12*s.* 6d.; Marke Valley, 6½ to 7; New Lovell, 32*s.* 6d. to 35*s.*; Okel Tor, 15*s.* to 20*s.*; Pen'Allt, 30*s.* to 32*s.* 6d.; Perran Wheal Virgin, 32*s.* 6d. to 35*s.*; Plynlimmon, 2½ to 2¾.

Wheal Grenville shares have been largely dealt in, and leave off 2⅝ to 2¾; at the meeting, on Thursday, the accounts passed showed a balance of assets over liabilities of 244*l.* 12*s.* 2d., charging up October cost, and crediting tin ores (computed) 1070*l.*; the tin sold realised 2888*l.* 7*s.* 10d. The report was very favourable; the mine, the agent states, has improved during the past quarter, and from present appearances will make still more satisfactory progress for the future from the present lode alone. Another important feature is the cutting of the South Condurrow tin lode, which the agent states is unquestionably underlying rapidly into Wheal Grenville. Providence Mines, 38 to 40; South Condurrow, 3 to 3¼; South Frances, 29 to 31; Tankerville, 13½ to 14; Tincroft, 44 to 46; Van, 53 to 55; Van Consols, 1⅝ to 1¾; West Chiverton, 51 to 52.

Wheal Crebor, ½ to ⅝; at the meeting, on Thursday, the accounts showed a balance in hand of 133*l.* 13*s.* 7d., and liabilities over assets of 309*l.* 3*s.* 11d. The report shows that the mine has very much improved, and that the pitches in the aggregate are worth 29½ tons of copper ores per fathom. West Maria and Fortescue, 26*s.* to 28*s.*; West Tankerville, 3¾ to 4; Wheal Kitty (St. Agnes), 8 to 8½.

Rosewall Hill and Ransom United, 22*s.* to 24*s.*; at the meeting the accounts showed a profit of 50*l.* 11*s.* on the quarter's working, and a credit balance of 68*2l.* 18*s.* 4d. A dividend of 1*s.* 6d. per share was declared, leaving 107*l.* 14*s.* 10d. in hand. The agents report that they hope to keep up the returns during the ensuing quarter. The tin sold in the present accounts realised 2210*l.* 8*s.* 10d. Parys Mountain, 3 to 3½; Wheal Seton, 24 to 26; Wheal Uny, 2¾ to 2⅞. South Carn Brea, 10*s.* to 12*s.*; 22 tons of copper have been sampled, valued at 100*l.*, and this has been taken 14 feet in the shaft, which still continues as good as ever. The agents fully expect to pay costs this quarter.

The Committee of the Stock Exchange has this day ordered the shares of the Eberhardt and Aurora Mining Company to be marked in the Official List. Don Pedro del Rey, 2¾ to 2¾; Pacific, 1⅞ to 2; Sweetland Creek, 3¾ to 4; Taquaril, 47*s.* 6d. to 50*s.*

New Beldon, ⅝ to ¾. The cross-cut at Readon, towards the Llandcelin vein, has been driven 7 fms. 6 ft., and several strings met with, which speaks well for cutting the lode shortly.

The Market for Mine Shares on the Stock Exchange during the week has been moderately active, and, notwithstanding the near approach of the holidays, a very considerable amount of business has been transacted. Van shares have been bought largely, and have advanced to 55, 57½, and, on the intrinsic merits of the property, are likely to have a further considerable rise. The report received from the mine is the most favourable ever yet received. Sweetland Creek shares are in demand, at 4½; there is already money enough in hand to pay another 4*s.* dividend, and the prospects for a continuance of profits are of a very high character. Pacific shares close 1⅞ to 2; the appointment of a committee of investigation has been well received, and the hope that a change in the management at the mines will be recommended has inspired a hope that the worst has been passed through. Don Pedro shares are firm, at 2 prem.; Taquaril steady, at 34*s.* to 36*s.* prem. Tin mines have been dealt in to a fair extent. Tincroft shares are quoted at 44 to 46; East Lovell shares have risen to 33½, 34½; West Chiverton shares are steady, at 51 to 52; Tankerville shares have improved to 13½, 14, and the reports are good. The following are the closing quotations:—Almada, ⅞ to 1⅛; Cape Copper, 6½ to 7½ prem.; Chontales, ½ to ⅝; Don Pedro, 1¾ to 2⅛ prem.; Eclipse, 1-16th dis. to 1-16th prem.; Frontino, ¼ to ⅜; General Brazilian, 1-16th to 3-16ths prem.; St. John del Rey, 23 to 24; Taquaril, 11-16ths to 13-16ths; Yudanamutana, ⅜ to ⅝; Assheton, 4 to 4½; Tanyr-Allt, 1½ to 1⅝; Van Consols, 1⅜ to 1¾; East Caradon, 5⅛ to 5½; East Lovell, 33½ to 34½; Great Laxey, 17 to 18; Prince of Wales, 29*s.* to 31*s.*; Tankerville, 13½ to 14; Marke Valley, 6½ to 6¾.

IRISH MINE SHARE MARKET.—The approaching Christmas and New Year's festivities produced their incidental indisposition to transact business, but more particularly to enter into new engagements, earlier this year than for many years past, which may be fairly ascribed to the strained attention to foreign politics and war news, which continue of an undecisive character, and consequently serve to produce an almost complete lull on our Stock Exchange, except in cases where unusually low prices, made by intending sellers, attract the notice of the very few speculators who are always ready to secure that which offers itself in their opinion as a great bargain. For these reasons mining shares, which are generally too well held to be forced on the market, have of late been only nominally, or to a very insignificant extent, dealt in; and such quotations as we can, under the circumstances, give will no doubt improve with the revival of business generally. Killaloe Slate Quarry and Connorree Copper Mines shares have not changed hands for some time, although the latter have deen enquired for. General Mining Company for Ireland shares (7*l.* paid) offer great inducement for purchase, at about 12*s.* 6d. to 15*s.* Of Mining Company of Ireland and Wicklow Copper shares the same can be said, at 7*l.* 5*s.* to 7*l.* 7*s.* 6d. for the former (7*l.* paid), and 7*l.* 17*s.* 6d. to 7*l.* 18*s.* 9d. (2*l.* 10*s.* paid) for the latter. Cape Copper shares are on sale at 14*l.*

A public company is about to be formed for developing CATTELL'S SYSTEM OF UTILISING VEGETABLE FIBRES, by which it is claimed that vegetable substances, however bound up with silicious or other impurities, can be rendered available for the manufacture of textile materials of domestic and general utility in almost endless variety. It is considered that the fibres of India, China, Africa, New Zealand, and other localities could by this process be simply and economically brought into a marketable condition; flax waste could be made into

surgical lint, and Irish flax could be made to produce a lea yarn approximating, if not equal, in quality to that of the best Flemish, Belgian, or French flax. Mr. Dugald Campbell, the analytical chemist, has made certain experiments, from which he concludes that the system can effectually purge the fibre from all extraneous matters without affecting, in the slightest degree, its normal strength; he finds that at least 80 per cent. of pure fibre can be extracted. A business prospectus will, it is understood, be shortly issued.

The MELLANEAR MINING COMPANY have notified that no further application for the new issue of shares can be received. It is understood that the applications largely exceed the number of shares to be alloted. The mine continues to open out most satisfactorily. The shares will shortly be quoted in the Official List.

At the Truro Ticketing, on Thursday, 3844 tons of copper ore were sold, realising 15,149*l.* 11s. The particulars of the sale were—Average standard, 101*l.* 19s.; average produce, 6⅞; average price per ton, 3*l.* 19s.; quantity of fine copper, 253 tons 7 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Nov. 17..	4344	£ 97 18 0	6¾	£3 17 0	11s. 5d.	£57 3 0
Dec. 1..	2423	99 9 0	6½	3 3 0	11 4	56 15 0
„ 22..	3844	101 19 0	6⅞	3 19 0	11 11½	59 16 0

Compared with the last sale, the advance has been standard 1*l.*, and in the price per ton of ore about 1s. 6d.

At the Great Laxey Mining Company board meeting, on Dec. 17, the directors declared a dividend of 6000*l.* (8s. per share) for the past quarter, payable on and after Dec. 31.

At Great Work Consols quarterly meeting, on Dec. 14, the accounts showed a balance of profit on the quarter of 117*l.* 10s. 7d., and a balance on the cost-book in favour of the adventurers of 200*l.* 13s. 10d. Capts. S. Tredinnick, Thomas Edwards, and John Johns say—"The prospects of the mine are very encouraging. There are 17 tutwork bargains working by 80 men and 5 boys; and 95 tribute pitches working by 228 men, tributes varying from 9s. to 16s. in 1*l.*, at 6*l.* per ton."

At Wheal Crebor meeting, on Thursday (Mr. J. Y. Watson in the chair), the accounts for the four months ending November showed a cash balance of 133*l.* 13s. 7d., and liabilities in excess of assets of 309*l.* 3s. 11d. A call of 1s. 6d. per share was made. Capt. Goldsworthy (who was present) reported encouragingly of the mine and its prospects.

At Great Wheal Vor United Mines meeting, on Wednesday (Mr. George Noakes, F.G.S., in the chair), the accounts made up to the present time showed a debit balance of 56*l.* 0s. 9d. Details appear in another column.

At New Hendra Mine meeting (Mr. John Tregoning in the chair) it was resolved to pay Capt. King 200*l.* for his interest in the property. A call of 5s. per share was made. Capt. S. Harris reported that the property is extensive, and has the junction of granite and killas, and the ground, generally speaking, is easy for exploration, and congenial for the production of tin. Capt. Wm. Rowe unhesitatingly recommends it to the attention of mining capitalists. Mr. Henty, of Great Wheal Vor, and Capt. King, of Ashtown, who were agents in the former working, have reported favourably upon the undertaking.

At the East Carn Brea Mine meeting, yesterday, it was resolved to adjourn the meeting to January 6 for the purpose of considering the advisability of stopping the mine. A large quantity of spare materials are to be forthwith sold to discharge merchants' bills overdue.

At the St. John del Rey Mining Company meeting, on Wednesday (Mr. John Hockin in the chair), the directors' report was unanimously adopted. Details will be found in another column.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT a decrease in the "notes issued" of 12,115*l.*, which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there was an increase in the "Government deposits" of 63,982*l.*, and in the "rest" of 4716*l.*, together 635,698*l.*; a decrease in the "other deposits" of 844,462*l.*, and in the "seven day and other bills" of 41,118*l.*, together 885,580*l.*=249,882*l.*; and deducting therefrom 60,601*l.*, the decrease in the "other securities" on the other side of the account, there remains a total decrease in the reserve of 189,281*l.*

LEVER'S MINING ALMANAC.—For the colliery office and ironworks there is, perhaps, no more useful and handsome sheet almanac published than that issued by Mr. ELLIS LEVER, of the West Gorton Works, Manchester. In addition to the usual calender matter, there are some valuable statistics relating to the coal and iron trades; and lists of Government Inspectors, officers of various geological and other scientific societies, and of Her Majesty's Ministers. In style and workmanship the almanac is quite equal to its predecessors. The almanac will be forwarded from the *Mining Journal* Office on receipt of 1s. 1d. in postage stamps.

At WEST ESGAIR LLE the appearances are very cheering. The weather interferes with dressing operations, nevertheless 20 tons of ore will be sold next week. The rib of lead in the south lode has increased in size during the week, and they are now opening out some fine ground.

COAL MINED WITH DIAMONDS.—We have been in the habit of terming our natural fuel the "black diamond." It has, however, remained for science to make the more precious crystallisation of carbon assist in unearthing the carbon itself. An interesting account is furnished, in a late letter from Pottsville, of the use of the Leschot diamond drill in sinking a shaft 750 feet deep, for the purpose, of testing the coal measures. The drill itself is not novel, nor the use of the diamond for the purpose, but the application in this case is interesting. The borings, made at the rate of 2000 revolutions per minute, progressed 4 inches per minute with a "solid bit," and 5 inches with a "core bit," in hard rock. The Phœnix Park Coal Company contracted with the Pennsylvania Diamond Drill Company to develope their coal field, some seven miles west of Pottsville. An ordinary shaft was sunk through the alluvial soil, and at the depth of 10 feet the rock was struck. A portable engine of five-horse power was placed in position, and the boring conducted with marvellous success. At 700 feet deep the hole was as straight as an arrow, and 2 inches wide. At that depth a core bit was used, and but 10 feet per day could be made, the delay being occasioned in raising the rods and removing the core. An ingenious arrangement in the bit holds the core, and brings it all out, and there it shows plainly every seam and stratum of whatever kind bored through during the day. The statistics of the works are important. The greatest distance driven in this shaft in a day was 43 feet: 600 feet from the top, the solid bit bored 20 feet in a day—the core bit but 10 feet. The great importance, however, is in the information obtained, not only to the owners of the immediate property, but to the whole region around. The total depth bored was 750 feet 10 inches, making the deepest boring in the region, and cutting 53 feet of workable coal. Even this, however, did not reach the bottom of the basin. The Lykens Valley vein, the lowest of the series, lies at an estimated depth of 500 feet below the Skidmore. The company found all the coal they wanted, and expect to sink a shaft to the Mammoth vein next summer.—*Iron Age (U.S.)*

PRESERVATIVE COATING FOR WALLS.—By the invention of Mr. P. PIMONT, Rouen, 1000 lbs. of potter's earth is mixed with a suitable quantity of water, and made into a paste, similar to ordinary mortar. To this is added a mixture of 20 lbs. of common oil and 4 lbs. of fish oil, and the whole is stirred. Then a separate mixture is made of 12 lbs. of archis, balls of lime, or other similar plant, in a suitable quantity of water to form a paste, and this is spread over that previously obtained. Then there are pulverised separately 8 lbs. of vegetable or animal charcoal, or any suitable animal or vegetable black, and this powder is distributed over the whole mass of paste, and the whole is well stirred. After having previously beaten 24 lbs. of coarse hair, in order to open it well, the filaments are strewed in small portions over the paste, at the same time agitating the material in all directions, in order to produce the homogeneous mass-like mortar, and which is similarly applied to the surfaces required to be covered with it.

BORING ROCKS.—By the invention of Mr. J. A. MCKEAN, Paris the drill for striking the rock is firmly secured to a piston enclosed within a cylinder of cast-iron or other suitable metal, and moved by steam, compressed air, or other elastic fluid. The piston and drill have a reciprocating motion, so that the point of the latter, when the machine is working alternately, approaches and recedes from the rock or other substance wherein the hole is to be formed, which is thus struck with a rapid succession of blows. The drill also at each backward stroke of the piston receives a rotative movement on its axis, so that it shall never strike the rock two successive blows in the same place, and so that it shall form a circular hole.

STEAM-ENGINES.—The invention of Messrs. J. F. SPENCER and W. INGLIS, Bolton, consists principally, first, in arranging two cylinders with an intermediate receiver, and with eight valves placed transversely; secondly, in placing a surface condenser over the shaft of inverted engines, and directly under separate transverse exhaust valves at one end; thirdly, in placing the eight valves on the side of the engines and otherwise; fourthly, in using two cylinders acting on one cross-head in place of each low-pressure cylinder; and fifthly, in extending the arrangements to engines in which the steam is worked successively in three cylinders.

COATING IRON SHIPS.—Messrs. G. FAWCUS and LUNGE, North Shields, take silicate of soda in solution, and mix with it ground chalk, whiting, or slacked and sifted lime, or other calcareous matters, so as to form a pasty mass, and for the purpose of hastening the drying and hardening they introduce finely-powdered manganese ore, or any suitable cement. The pasty mass is made up as required, and may be applied with a brush, or in any convenient manner, to the outside or inside, or to both the outside and the inside, of an iron ship or other vessel.

OPEN STOCK EXCHANGE.—Quotations of the Sale on Dec. 13:—
Don Pedro North del Rey Gold Mining Co. (Limited), 14s. paid, 2*l.* 15s. 6d.
General Brazilian Mining Company (Limited), 17s. paid, 14s. 9d.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 2	Aberdaunant	13	£10 10 0	Adam Eyton.
16	Great Laxey	100	21 3 6	Burry Port Company.
	Powell United	40	11 8 0	Sims, Willyams, & Co.
	Llanerchyraur	50	12 5 6	Stock and Co.
20	Foxdale (Isle of Man)	100	25 10 0	Sims, Willyams, & Co.
21	Aberdaunant	10	11 1 0	ditto
22	Wheal Mary Ann	50	22 15 6	Stock and Co.
—	ditto	45	12 12 0	Burry Port Company.
	Exmouth	15	15 10 0	don. Bush, & Co.
—	ditto	10	11 0 6	k and Co.

BLENDE.

Date.	Mine.	Tons.	Price per ton.	Purchasers.
Dec. 22	Exmouth	100	£ 2 8 0	Dillwyn and Co.

BLACK TIN.

Date.	Mine.	Tons c. q. lb.	Price p. ton.	Amount.	Purchasers.
Dec. 17	Wheal Uny	10 7 0 19	£75 13 4	£ 783 15 9	—
	Pedn-an-drea	13 15 0 6	77 0 0	—	Carvedras.
	Cuddra	10 1 3 1	73 12 6	742 14 6	—
19-20	Great Wh. Vor.	34 7 1 22	—	2691 13 9	—
21	So. Condurrow	11 13 2 17	73 10 0	858 13 6	Boltho.
	Penhalls	7 3 1 14	—	529 3 0	Daubuz.

COPPER ORE

Date.	Mine.	Tons.	Price per ton.	Purchasers.
Dec. 14	Caldbeck Fells	5	£18 1 6	Bibby, Sons, & Co.
—	ditto	16	6 5	ditto

Notices to Correspondents.

LEAD ORES.—Can any of your correspondents inform me whether any of the processes that have been suggested for the manufacture of white lead direct from the ore are at present in use; also whether low quality ore—about 4 or 5 per cent.—can be used for that purpose? I understand that when white lead is made by the ordinary process the lead for the grills must be very pure, and, therefore, I do not know whether it must be a particularly rich lead ore.—J. M.

SMELTING IN MEXICO.—Can any of your readers inform me where I may obtain a work on the smelting of lead and silver ores, as practised at the present time in Mexico and South America?—H. C.: *Bristol.*

PRACTICAL METALLURGY.—I hear that a German inventor is at present in this country occupied with the development of an invention, by the aid of which he has succeeded in extracting gold, silver, and platinum from some extensive clay deposits which occur in the county of Kent. The process is described as extremely simple, and the metals are said to be obtained in such quantities as to leave fair commercial profit. Can any of the readers of the Journal tell me whether there is anything really practical in the invention, or whether it is merely a Berdanising process, in which the raw materials must be salted to give the desired results?—H. E.

PATENT FUEL.—A process was some time since described in the Journal for utilising small coal by combining it with lime and water. Of course, I presume that the dry lime must first be mixed with the small coal, and the water subsequently added; but I should be glad to learn how much lime must be added to each ton of coal.—J. S.

MANUFACTURING INDUSTRY OF SCOTLAND.—In last week's Journal, when describing the works of Messrs. R. Napier and Sons, reference was made to a slotting machine, as being designed by Mr. John Elder—it should have been by the late David Elder. The construction of the plate and bar furnaces should have been on Gorman's principle, not Govan's.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, DECEMBER 24, 1870.

THE MINERS' ASSOCIATION OF CORNWALL.

We have always advocated the education of our working miners. There is not another of the industrial classes exposed to so many dangers, or to the same kinds of risks, as the miners are. The result of this is that they become inured to their precarious positions—they do not see how they are to relieve themselves from them, and, through their ignorance, they become careless, almost indifferent: and with strong fatalistic tendencies, take no heed for themselves, blindly trusting in a Providence of whose care they have the most imperfect appreciation. Experience has shown us that the more ignorant men are the less care they take of themselves, or of those by whom they are surrounded, and the less careful are they of the interests of their employers. Ignorance leaves the mind in a chaotic state—everything is done by blind impulse; no effort is made as the result of thought. It may possibly appear to some—we hope not to many—that the render of slate-rocks, or the borer of granite masses, need not know anything beyond the handling of a pick or the driving of a wedge. These people forget how deeply the safety of the workmen is involved, and how necessary it is that the mind should direct the hand, and that everything should be done with due deliberation. The man who cut away the prop which supported a bad roof in a colliery, and buried himself by his own act in a grave of shale, is but a type of a large number of men who are still in the depths of sensual ignorance. Education—not merely learning to read and write, but education in the sense of training the senses to observe, and cultivating in the mind habits of thought—is essentially necessary for the protection of every child born into this ever-varying state of existence. The more the individual is exposed to danger, the more important it is that he should have been trained to use the eye and ear—and the more necessary it is that the mind should have been schooled into the system of thinking.

To the miner, whose daily life is one of danger, it is imperative that he should have been disciplined into carefulness; that he should have been trained to self-reliance; and, each power of the mind being by exercise quickened, that he should be armed by knowledge against every emergency. This can only be done by supplementary instruction in some branches of science to the ordinary teaching of our schools.

Beyond this, the miner has not only to protect himself in his labours: he has to secure for his employers the best return he can for the capital they are expending in the subterranean explorations. This involves a little knowledge, at least, of some of the divisions of physic and of chemistry. To every man working in a mine it is necessary to secure his own safety, and that of his comrades; that he should *know* the science of the elements by which he is surrounded; and, if the mine adventurer does not see that he employs skilled, instructed labourers to do his work, he is acting as unwisely as the adventurer who would set an eyeless man to look for sparkling gems.

It is only within a few years that these facts have become evident to the mass of the public. We are not quite certain that they are fully appreciated even now. Certain it is that in the discussions which have arisen out of the formation of the new School Boards there has been much more anxiety displayed to secure a supremacy of teaching power for ill-understood dogmas than to establish a system by means of which the young mind shall be taught the true and beautiful, as they are manifested in everything by which the Creator has surrounded us. We have been led into these remarks by the consideration of some results, showing the actual working of the educational classes of the Miners' Association of Cornwall, with which we have been supplied.

During the year 1869 and 1870 classes were maintained in Redruth, Camborne, Helstone, Breage, Carharrack, St. Just, and Pendeen; and at the May examinations of the Department of Science and Art the numbers of the young miners who passed were as follows:—

	Chemistry.	Mineralogy.	Mining.	Geology.
REDRUTH	6	2	—	—
CAMBORNE	2	2	—	—
HELSTON	3	4	—	3
BREAGE	3	6	4	2
CARHARRACK	9	7	—	—
ST. JUST	1	6	1	6
PENDEEN	6	7	4	—
	30	34	9	11

As contrasted with former years, this was a very considerable advance. The exact conditions have been as follows:—

	1866.	1867.	1868.	1869.	1870.
MINERALOGY	9	20	17	18	34
CHEMISTRY	12	15	12	24	30
GEOLOGY	1	2	6	6	11
MINING	5	12	10	9	9
Total	27	49	45	57	84

The present position of the classes of the Miners' Association are as follows:—

1.—ST. DAY: Subjects taught,—*Chemistry* and *Mineralogy*. Number of pupils, 21.
2.—CAMBORNE: Subjects taught,—*Mechanics* and the *Power of Steam*. Number of pupils, 13.
3.—HAYLE: Subject taught,—*Chemistry*. Number of pupils, 19.
4.—BREAGE: Subject,—*Mining*. Number of pupils, 10.
5.—BREAGE: Subject,—*Mineralogy*. Number of pupils, 8.
6.—HELSTON: Subjects,—*Chemistry*, *Mineralogy*, and *Geology*. Number of pupils, 10.
7.—ST. JUST: Subjects taught,—*Chemistry* and *Geology*. Number of pupils, 10.
8.—PENDEEN: Subjects taught,—*Chemistry*, *Mineralogy*, and *Mechanics*. Number of pupils, 12.

Thus it appeared that 106 young men out of the scattered populations of those eight mining districts are anxiously seeking for knowledge which they find by experience will be useful to them in their bread-getting. We learn that in the Breage district a considerably larger number would attend the classes. "Many miners say they would attend, but they cannot write or spell well enough to take notes." A desire has been expressed that a class should be formed in the parish of Constantine, "but most of the miners in that neighbourhood are unable to read or write." Feeling the importance of that knowledge which their brother miners have been acquiring, those miners desire to have the advantages thereof, but, not being possessed of the instruments necessary for working this mine of knowledge, they are compelled to blunder on in their own rude way, bewildered by the mists of ignorance.

Contemplating these facts, some thoughts very naturally arise as to the possibility of improving the existing conditions of our miners. Our new educational system should remove the black stain of ignorance from us, which, as we have seen, prevents a man from acquiring that knowledge which would improve his powers of earning his daily bread. But, beyond this, it appears to us that an association which was organised in October, 1859, and which has been quietly doing its good work for 11 years, should receive a larger amount of support from the public, which must be interested in the annual production of our mineral wealth—recently shown to be of the value of 45,954,691*l.* in 1869—than it has hitherto received.

We hope to return to the consideration of this subject.

THE EDUCATION OF THE MINING ENGINEER.

The professional position of the mining engineer was ably discussed in a paper read before the Institution of Engineers in Scotland, by Dr. YOUNG, Professor of Natural History in the University of Glasgow. He feels, as many others must have felt, that the habitual assumption by all classes of the title "Engineer" is altogether unjustifiable, the effect being alike prejudicial to the public and to those who have received a regular course of training to qualify them for the duties of the profession; but he seems to acknowledge that the difficulty of dealing with the subject is increased, because so many engineers of good professional position do not possess so large an amount of scientific knowledge as could be wished. Referring to mining engineers generally, he remarks that he who merits the comprehensive title of mining engineer should be a geologist and mineralogist as well as a civil engineer; and he very properly contends that those who are most deeply and directly interested in the efficiency of the mining engineer are the proprietors of mineral wealth. Motives of personal interest, he says, and few will dispute it, seem to justify the insistence by mineral proprietors of some organised scheme for the instruction of the men on whose advice they rely. But, he continues, the profession of engineers has a duty in the matter, and it is for the profession to consider the amount of its obligations to determine whether it is to consist of so many units, each competing with his neighbours, and anticipating his fate by the uncertain operations of the law of natural selection, or is to form itself into an instructed court, qualified and courageous enough to decide who are or are not entitled to public confidence.

There certainly appears to be no valid reason why engineers should be in a worse position with regard to the recognition of their status than lawyers or medical men, and if any arrangement could be made whereby pretenders to the title of "engineer" could be exposed to the same opprobrium as quacks in the medical profession it should at once be made. If a patient suffer injury at the hands of a medical pretender the latter risks the punishment attaching to manslaughter: but in the case of a casuality arising from inadequate engineering arrangements the question of the education received by the engineer is scarcely raised, but merely whether he has exercised the best of his judgment. This is injurious to the position of the engineers as a class, and most dangerous to those whose lives are entrusted to them. Prof. YOUNG is certainly justified in his assumption that intuition alone does not fit a man for the duties of mining engineer, and that merely local experience does not place him above the level of an underground viewer, and assuming this he proceeds to enquire what training is best fitted to impart the necessary knowledge in the shortest time, and how the position of engineers is to be certified. He very justly urges that the establishment of new schools is not desirable, because any new school could only, as things now stand, injure existing schools or colleges, without securing its own end. There is not money to be had sufficient to start a scheme which would not injure them. It would require 3000*l.* a year as a modest minimum to secure the teaching of the higher branches, and where is the preliminary training to be got? Either by opening preliminary schools, or by insisting on an entrance examination, which would for some years keep the college empty, till the schools responded to the stimulus, and that, as he says, would only be if the engineers counterbalanced in profit the payment by results, which at present holds the schoolmaster's nose to the department grindstone. Obviously the scheme would be too extensive, both in scale and cost. But he does not despair of the day when it may be realised. There are many subjects not yet included in the university curriculum, which are nevertheless capable of theoretical discussion, as mining and metallurgy. The time will come when these will be included. Thereafter the co-operation of several professions and trades will render possible the formation of what, for the want of a better phrase, may be called a technical school, one, that is to say, in which instruction will be given, not in theory, but in the application of theory to practice. Thus, practical chemistry, geological field work—in other words, the art of mapping a country—will find a place, not as superseding, but as completing the higher instruction.

Returning to the consideration of a professional examining board granting certificates, on examination, to all who chose to come before it, Prof. YOUNG remarks that theoretically he has no objection to the existence of such a board, independent of a university—in fact, in the case of the medical profession, he had recently urged its creation by Government, on the ground that a perfectly impartial and independent court of examination in practical subjects would give a security not to be obtained under our present system. A similar court controlling the admission of engineers to the profession would be a most desirable innovation. Of course, the co-operation of members of the profession throughout the country would be necessary, but that co-operation does not seem difficult to obtain. Nor does he anticipate any difficulty in procuring examiners. The profession obtains very many who are well qualified to judge on the knowledge and skill of candidates, and such men of high attainments are sufficiently distributed through the country to give good prospect of that uniformity of standard so needful when the same honour is to be awarded in all districts. The association with the Court of Teachers—be they professors or others—is a detail only to be settled after the subjects in which candidates are to be tried have been examined. But in no case should any assessor be elected save on the ground of demonstrated practical skill in addition to theoretical attainments. Let us suppose the Court agreed upon. On what conditions may the candidates present themselves? They must be men who have either gone through an organised course of study, or who have prepared themselves for examination when, where, and how it seemed best for themselves. We think all must agree with Prof. YOUNG, that if the latter course is alone available to the student it would, in effect, make the profession the monopoly of the wealthy. The system of apprenticeship, he remarks, will, of course, be appealed to; it is a very important educational agent or method, but in objecting to the extreme value which many are disposed to attach to it there is precedent in the medical profession; it is a useful auxiliary of, and an admirable sequel to, connected systematic study; but because it is of necessity unsystematic, it cannot be held as superseding organised courses of instruction. The retention of the apprenticeship system is indispensable, but its place in the scheme of study requires still to be fixed.

But theoretically excellent as are all Prof. YOUNG'S statements, it is extremely questionable whether any real advantage would result from their adoption in their entirety. Students educated upon this system would be precisely in the position of those who study at Jermyn-street. But few would care to entrust them with any important office, and in truth they are less fitted for managing mines or conducting engineering works than many less highly educated. A youth who has passed the matriculation at London University, or taken the B.A. degree in Scotland, and subsequently served his apprenticeship under a practising engineer as at present, would surpass any man prepared according to any scheme of special academical training we have seen suggested. The period of time required for this would be no greater than would be consumed in completing any of the various so-called technical courses hitherto proposed; and if it were made illegal for any man to assume the title of "engineer" until he had passed one such public examination, and likewise served his articles as mentioned, the status of engineers as a body would be raised, and the public might well be congratulated upon the change, for there can be no doubt that there is much force in the observations made in the discussion which followed the reading of the paper by Mr. RALPH MOORE, the Government Inspector of Coal Mines for the district, that it is desirable in mining, as in every other branch of engineering, that those engaged in it should be well qualified by education, but that in mining local knowledge is of paramount importance. Mr. MOORE, like all practical men, knows that book knowledge, and even practical knowledge acquired in another district, is of comparatively little importance in localities where peculiar circumstances and conditions have to be dealt with; and he would, therefore, prefer men who combine moderate scientific knowledge with some experience in the locality they intend to work in, to those who, although able to satisfy an examining board as to their efficiency in certain pre-arranged subjects are without that experience to guide them. It is earnestly to be hoped that as a result of the paper, and of the discussion upon it, some energetic steps will be taken for the improvement of the engineers' status, but we trust practice and experience will ever be considered as far preferable to mere scientific training as it is at present.

THE COAL BENEATH CANALS.

Some few weeks ago, under the above heading, we published particulars of a case in which a firm of colliery proprietors were prohibited by the Government Inspector of the district from working their coal under a canal, there being danger of the said canal breaking into the mine, and drowning some of the colliers. It will be remembered that the firm in question was that of Messrs. DEELEY and DUSTON, of the Sneed, or Easington Farm Colliery, near Bloxwich, South Staffordshire, and that they availed themselves of the arbitration clause of the Mines Inspection Act, and submitted to the Home Secretary, Mr. BRUCE, the names of certain mine agents, so that one might be chosen as arbitrator. Mr. W. BLAKEMORE, of Wolverhampton, was selected, and after hearing both sides of the question he gave it as his award that the Inspector, Mr. J. P. BAKER, was perfectly justified in taking the steps he had, and that Messrs. DEELEY and DUSTON must discontinue to work the coal within a certain distance of the canal.

Since the settlement of this case one of greater importance has been decided, so far as arbitration is concerned, in which the circumstances are in some respects similar, but with an entirely different result. These cases are looked upon with the greatest interest by both colliery proprietors and canal companies, as upon their issue depends property of immense value, and the successful result on the part of colliery owners of one case will bring about many others. The case now under notice is one in which the plaintiffs—Messrs. DUNN BROTHERS, coalmasters, of Netherton, near Dudley—having leased from the Earl of DUDLEY, some two years back, the Village pits at Windmill End—part of the working of these pits running under the canal of the Birmingham Canal Company—sued the company for 500*l.* damages, the canal having broken into the pits and drowned out part of the workings. The case came on first for hearing at the Worcester Summer Assizes, 1869, and was from thence referred to Mr. GRAY, Q.C. Mr. MOTTERHAM (instructed by Mr. WARMINGTON) appeared for the plaintiffs, and Mr. EVANS, of the firm of INGLEBY, WRAGGE, and EVANS, represented the Canal Company. The witnesses for the former were—Mr. E. B. MARTEN, C.E., and Messrs. J. HUGHES, T. LATHAM, SPRUCE, FLETCHER, and SKIDMORE, all mine agents; for the latter, Messrs. THOMAS and HANCOX, the company's surveyors; Mr. HENRY JOHNSON, Mr. DAVID PEACOCK, and the late Mr. YARDLEY gave evidence.

The Messrs. DUNN, it seems, in compliance with the Railway Clauses Consolidated Act, gave notice to the company when their workings had approached within a certain distance of the canal. The company then failing to purchase the coal under the canal, Messrs. DUNN continued their works, and the consequence was, despite the continuous repairs done to the canal, water penetrated into the pit, and ultimately prevented further working. The points brought forward for Mr. GRAY'S decision were—1. Whether or not the notice given was sufficient, such notice simply stating that the plaintiffs intended to get the brooch coal, it appearing that one stratum of coal gotten was called the top coal.—2. Whether or not it was canal water which came through the roof into the plaintiffs' colliery, the company alleging that part of the water was land flood, and part from an engine pool which was also upon the surface of the colliery.—3. Whether or not the company were guilty of negligence in not keeping the canal water-tight, or in not sufficiently repairing the canal. After hearing the whole evidence, and thoroughly considering the matter, Mr. GRAY gives as his award the following answers to the foregoing questions:—1. That the notice to the company was sufficient.—2. That the water coming into the colliery was canal water.—3. That great repairs had been done by the canal company, but there appeared no certain means of keeping the canal water-tight.

This decision is a gratifying success for the plaintiffs, as it settles a difficult point which has never before been proved, and one upon which canal companies have relied as an escape from all similar actions. In cases where action has been taken by colliery proprietors against canal companies, they have always failed to prove satisfactorily that the water in their mines has come entirely from the canal under which they have been working; and many proprietors whose mines have been drowned out have been aware of this great difficulty, and have either not had the means or the will to enter the lists with the canal companies, who would most certainly push the thing to its utmost limit, rather than be nonsuited, and the expenses of the loser would be more than almost any private individual could sustain. There is no doubt that in this instance the canal company will appeal to a higher court, otherwise innumerable actions may be taken against them. The question now to be decided is, if colliery proprietors, after giving the legal notice, bring a companies' canal upon them, who is to pay damages? A good way out of the matter, in some instances, would be for the canal company, on having notice from colliery proprietors, to communicate with the Government Inspector, who if he found it dangerous would only be doing his duty, by preventing the coal being worked under the canal, as in the case we quoted at the commencement. But surely some compensation is due to the owner of the coal. It is quite evident that more perfect legislation is necessary in these cases.

IMPROVED STEAM-STAMPER.—An improved steam-stamper, the invention of Messrs. CHATWOOD and STURGEON, has just been tried at the Goonbarrow Mine, near Bodmin. The new stamp is a steam-hammer of the moving-cylinder type, and the stamp-head acts directly on the material, and the crushed stuff passes through the sieves, as in ordinary stamps. The hammer or ram is also the cylinder, and is acted on by the direct action of steam, compressed air, or water pressure. The machine thus comprises in itself both the stamper and the motive-power engine. The ram works in a closed cistern or coffer, entirely surrounding the ram head, and having a series of openings, in which sieves or gratings are fitted, through which the ore passes when it has been crushed to the proper fineness. An improved mode of introducing the ore is also adopted. The passage from the shoot into the coffer is placed at such a height above the anvil as to allow the ore as it falls to spread equally over the anvil, and is also so situated that the moving cylinder or ram, when at the top of its stroke, leaves the passage momentarily open, allowing a small quantity of ore (barely enough to be dealt with by one blow) to fall through, and in its downward stroke the cylinder or ram itself serves as a door, closing up the opening and preventing the further passage of the ore. The inclination of the shoot is so adjusted that the ore is barely supported thereon without slipping downwards towards the coffer until disturbed by the shock of the blow, which causes a portion of the ore in the shoot to slip down into the passage leading to the in-

perior of the coffer, from which it falls upon the anvil the moment the opening is exposed by the lift of the ram. The height of the opening above the anvil is sufficient to cause the ore to scatter equally over the anvil, and the blow being consequently delivered fairly on the top of the ore, by the whole face of the ram head at once, instead of rubbing against one edge, gives both a more effectual application of the force, and, at the same time, prevents the rapid wearing away of the metal. The cost of the machine erected at Goonbarrow, which has a 15-cwt. hammer with 16-in. fall, was 500*l.*; and, as about 4 in. of the hammer are allowed for wear, it is anticipated that the machine will prove very durable. The judges of the Royal Cornwall Polytechnic Soiety unanimously awarded it their First Silver Medal.

THE BEST COAL FOR OUR STEAM NAVY.

The following letter has been addressed by Mr. THEO. WOOD BUNNING, of Newcastle, to the Editor of the *Iron and Coal Trades Review*:—

SIR,—My attention having been called to a speech of Mr. R. Fothergill, M.P. for Merthyr [published in last week's *Mining Journal*], I am induced to make a few remarks thereon. Mr. Fothergill states that "people begin to ask themselves, 'Have we got the best coal that can be procured for the use of our war steamers?'" I unhesitatingly agree with Mr. Fothergill in this, and say—No, they have not, nor will they until they use nothing but North Country steam coal, which has proved itself over and over again both of a higher caloric value, a higher speed of combustion, and equally smokeless with the best Welsh, with this most important advantage, it does not deteriorate in the bunkers and become useless when most wanted. Fancy an English steamer blockading a port with Welsh coal, and having to wait some weeks, with banked fires, the approach of the enemy. What would the engineers give, on setting their fires away to give chase, if they had some good Hartley on board, to replace the miserable dust that keeps falling through, after smouldering for an instant, on their bars? The Welsh coal is not quick at any time, and still less so when it all falls to duff, after a few weeks' exposure to the heat of a coal bunker. Mr. Fothergill goes on to say that those people did not care about the matter before. I beg Mr. Fothergill's pardon; those people who were interested did care; those who had trial trips to make, or had to show off the paces of these same war steamers, did care; and what did they do? Why, they used half-and-half. I hold a letter from my late friend, Admiral Paris, of the Imperial French Navy, an officer of the most distinguished mechanical talent, which contains the following passage:—"When using foreign coals for trials at measured miles, or elsewhere, we use half Newcastle and half Cardiff as the best mixture for our grates and boilers." This, while perfectly confirming our practice here and elsewhere, where results have to be obtained from large ships modelled on the Government plan, nevertheless contains in its last phrase subject matter for enquiry, which it would well behove M.P.'s to have thoroughly sifted.

I admit half-and-half is the best mixture, under all circumstances, for the bars as used in the Navy some years ago. But why were these bars systematically made to exclude the burning of North Country coal? Why have the boilers and bars of Her Majesty's Navy been increased so as to get some amount of speed out of the slow-burning, smouldering Welsh coal? The experiments at Devonport and elsewhere having now so thoroughly proved that, with short and suitable furnaces, North Country coal can be smokelessly consumed, it naturally begins to show its superiority, to the excessive chagrin of its opponents. And as it can be reduced without precluding the use of any other coal, there is no valid reason why it should not be so reduced, and our ships rendered as efficient in warm climates, after long voyages or during blockades, as they are on their trial trips.

There is one little matter that keeps cropping up now in the speeches of the Welsh supporters—the Government, which is excessively sly, are reminded that if a mixture of bituminous and Aberdare coal is actually the most beneficial that there is bituminous coal also in Wales. I apprehend we should hear very little about the difficulty of mixing them if Government could be made to see this.

Now, there is an argument in favour of the new furnaces that, I think, has been overlooked by both sides—the absolute importance of having furnaces in which all classes of coal, bituminous as well as anthracite, can be burnt to the best possible advantage. Coal of various characters is now found in many of our possessions, and Newcastle coal (strange as it may seem to Welshmen to hear it) may also be found, even where there is no Welsh. Why, then, try to make your furnaces so as to exclude these, when there are circumstances under which you may be unable to get anything else?

The concluding words of Mr. Trevelyan I endorse most cordially, and I hope, now I have respectfully endeavoured to prove to him that the Government is acting wisely in the matter, we shall hear nothing further from him on the subject.

Newcastle, Dec. 19. THEO. WOOD BUNNING.

FOREST OF WYRE COAL FIELD.—At a meeting of the Manchester Philosophical Society at the Museum, Peter-street, Manchester, on Tuesday, an interesting paper was read by the Secretary on "The Spirorbis Limestone in the Forest of Wyre Coal Field," which had been communicated by Mr. Daniel Jones, F.G.S. The subject is one which has been specially dealt with by the society in papers read by its members, and is naturally attractive to them from the circumstance that this limestone is so largely developed in the Upper coal measures around Manchester. Mr. Jones claims in his paper to have pointed ont for the first time the existence of the limestone in many places in the Forest of Wyre coal field, by which its continuity between Tasley, near Bridgnorth, and the southern part of the Forest of Wyre coal field is shown. This discovery will be of great advantage to geological students in that district, because it is a convenient and easily recognised datum line in the strata. The papers on the Forest of Wyre Coal Field, which are now being contributed to the *Mining Journal* by Mr. Jones, may be expected to contain a new reading of the geological construction of this coal field, based upon the discoveries which he has made regarding this limestone.

CAPE OF GOOD HOPE—DISCOVERY OF MORE DIAMONDS.—The Union Company's mail steamer, Celt, arrived at Plymouth, on Tuesday, with a large general cargo, including several parcels of diamonds, the estimated value of which is 40,000*l.* Diamonds of great value, in large numbers, continued to be found at the Cape. A new diamondiferous track had been discovered, and the old ones were keeping their ground. The diggings now extend over 100 miles of country, and the population had increased to 15,000. One man had found two diamonds valued at 120,000*l.* News from Natal reports that one party belonging there had found diamonds to the value of 150,000*l.*; one gem found by them weighing 105 carats, which has been lodged in the Natal Bank. The Star of Beaufort West, a splendid gem, over 88 carats, had been exhibited at Cape Town, for the benefit of the Ladies' Benevolent Society.

IRON TRADE.—Messrs. Shaw and Thomson state that the production of rails in 1868 was 730,000 tons, in 1869 it was 1,000,000 tons, and the make for the present year will be 1,300,000 tons. At the beginning of the year the price for rails of Russian specification was 7*l.* per ton, and for American Erie rails 6*l.* 15s. per ton, at works. As the year advanced, prices gradually advanced until June, when 7*l.* 10s. was paid for Erie rails, and 7*l.* 12s. 6d. for rails of Russian specification. Since June a steady decline has set in, and prices have receded to 6*l.* 5s. for Erie rails, and 6*l.* 12s. 6d. for rails of Russian specification. The total shipments of rails in the 10 months ending October of 1868, 1869, and 1870 were, respectively, as follows:—509,968, 793,619, and 931,991 tons. The future prospects of this branch of the trade depend, to a very large extent, upon an early settlement of the French and German war, and upon peace being maintained on the Continent. The following were the shipments of rails to the chief foreign markets for the 10 months ending October of each of the three following years:—

	1868.	1869.	1870.
Russia.....Tons	100,554	247,278	204,005
United States.....	228,091	262,829	341,629
British India.....	61,333	76,200	140,845
Austria	10,498	22,317	35,495
British North America ..	15,535	23,929	34,705

The falling off exhibited in the shipments to Russia took place in the month of October; there was less pressure this year at the close of the season than last year, and freights were not forced up to the extreme rates of last autumn. India, as we predicted in our remarks 12 months ago, largely augmented her demand this year, and we believe will not fall back in next year's wants. America continues to be our largest buyer, taking nearly one-third of the total manufacture of English rails. It is calculated that this year's total exports will reach 1,030,000 tons. With regard to steel rails, there has been a gradual and steady increase in the manufacture, but the difficulty in obtaining an adequate supply of suitable ore tends to limit the progress of production. The rail-mills generally are still fully employed, and many have orders in hand for the next three or four months, but others are gradually working off their orders, without being able to replace them readily, except at a concession in price.

EXPORTS OF WROUGHT-IRON.—The quantity of wrought-iron exported from the United Kingdom in October amounted to 13,335 tons, against 12,605 tons in October, 1869, and 12,742 tons in October, 1868. Russia and India took the largest quantities. The aggregate exports of wrought-iron in the ten months ending October 31 this year were 114,409 tons, as compared with 112,795 tons in the corresponding period of 1869, and 106,010 tons in the corresponding period of 1868. In these totals Russia figured for 10,954 tons, against 11,565 tons and 7195 tons respectively; the United States for 6118 tons, against 6575 tons and 3589 tons respectively; British America for 10,053 tons, against 7537 tons and 7871 tons respectively; British India for 18,079 tons, against 11,984 tons and 32,257 tons respectively; and Australia for 7989 tons, against 13,014 tons and 10,446 tons respectively. The value of the wrought-iron exported in October was 228,847*l.*, against 226,097*l.* in October, 1869, and 242,106*l.* in October, 1868; and in the ten months ending Oct. 31 this year 2,126,774*l.*, against 2,029,677*l.* in the corresponding period of 1869, and 1,914,758*l.* in 1868.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 22.—The Preliminary Meeting of the South Staffordshire Ironmasters' Association is called for Thursday next, at Birmingham. It is not anticipated that any change will be made in the trade list of prices, which are only held to be binding by a small number of the members, the rest getting what they can, and varying no little below the official rates. The actual orders coming in are few, and of small amount, but this is always the case just before Christmas, when stock has to be taken, and the year's balance struck. On the whole, the Iron Trade of Staffordshire is not so bad, considering the effect of the war in reducing the demand for railway iron particularly, and otherwise restricting trade.

A long-pending case of no little importance to colliery proprietors and proprietors of canals in mining districts, has advanced a stage. Messrs. Dunn, of Dudley, leased from the Earl of Dudley a mine of brooch coal at Windmill End, over part of which the Birmingham Canal ran. Messrs. Dunn gave notice to the company of their intention to work within 12 yards of the canal, and the company did not exercise their right to buy the coals, consequently the lessors worked it. Water percolated the workings and stopped operations. Messrs Dunn asserting that it came from the canal, sued the company for 500*l.* damages, and the case was referred at the Worcester Summer Assizes of 1869 to Mr. John Gray, Q.C., to determine the points in dispute, and he has after many sittings found that the notice was sufficient, which was disputed, that the water came from the canal, and that the company did great repairs, but that there were no certain means of keeping the canal water tight. The Queen's Bench will now have to decide finally the application of the law to these facts.

On Friday afternoon a boiler burst at Mr. Fox's Boothen Brook Colliery, near Hanley, in North Staffordshire. A child playing near was killed, and six other children were injured. At the inquest, which was opened on Monday, it was stated that the boiler was an old one, and the evidence was that it was working at only 9 lbs. The proprietor said that it was repaired a month before the accident, and one of the men who did the repairs said he would step on it at 25 lbs. pressure. It appeared, however, that it leaked considerably; some said with a continuous stream like a straw, others that it was a mere drip. One of the witnesses said he saw the boiler shake and the brickwork move five or six minutes before the explosion. He ran away and warned the others, but they took no notice. He was 40 yards off when it burst, but a brick struck h m. The enquiry was adjourned for a professional examination of the boiler to be made.

The Dudley Correspondent of the *Wolverhampton Chronicle* writes:—

Should there before long be a cessation of hostilities upon the Continent, it is thought that the iron trade would become brisk, and the demand very much increased. This idea is based upon the fact that the stocks of finished iron, generally speaking, are smaller than usual, and as a consequence the merchants would begin to order rather largely. The works west of Dudley, for the most part, are fairly off for orders, and some of the proprietors are wishful that their workmen should lose as little time as possible during the Christmas. At the Preliminary Meeting, to be held on Thursday week in Birmingham, there is no doubt existing rates will be upheld, as the declaration of any reduction would inevitably be followed by a reduction of the men's wages, and would lead to troubles which it is most desirable to avoid. All the producers of "marked iron" continue to command the list prices, and under any circumstances they have sufficient orders on their books, and daily coming in, to enable them to maintain these for some time to come. For second and more inferior makes it is still difficult to fix quotations. If no consumers have been holding off purchasing, except just sufficient for present use, in the belief that the continued unfavourable state of affairs as it regards the war might exercise a sufficiently adverse influence on the trade to result in a decline of prices, but such has not been, nor is it likely to be, as we know orders are coming in, and that freely, for first-class iron. The demand for pig iron made from the native ores of the district is rather buoyant, and melters are in good request. Mine pigs with a modicum of flue cinder also meet with a ready sale. Messrs. Benjamin Wood and Co., of the Brettell-lane Ironworks have taken to the Corbyn's Hall furnaces, lately worked by the proprietor, Mr. Benjamin Gibbons, and they will soon be in operation again. There are others which will soon be relighted. This augurs well for the trade of South Staffordshire. The rapid strides which have been made in the production of pig-iron in the kingdom may be seen from the fact that in the year 1750 the entire annual "make" was 75,000 tons; in 1800, 180,000 tons; in 1825, 600,000 tons; and 1857, 2,500,000 tons, and we might venture to say that in the present year the production of the United Kingdom will be little short 4,000,000 tons. In referring to the connection of Inventions with the iron trade, we may state that by means of the hot-blast the same amount of iron may be produced by the expenditure of 1,500,000 tons of coal as formerly required 3,400,000 tons, and this quantity will be further reduced by the method which is now being adopted by the leading members of the trade of utilising the waste gases. The waste of fuel under the present system of smelting is enormous, and a considerable amount of this prodigality must be charged to the account of South Staffordshire.

TRADE OF THE TYNE AND WEAR.

Dec. 22.—On the Tyne there have been large arrivals of vessels and also considerable sailings, and the Coal Trade is again very active, the demand for shipment, both coastwise and foreign, being good. The weather, however, on Tuesday again changed, and strong east winds have prevailed, with tremendous weather on the whole east coast, and this must, of course, obstruct the progress of shipping to a considerable extent, and it is feared, also, cause some loss. A new passenger steamer from the Tyne to the Thames is to start this week, fitted up expressly for the trade on the most improved plans; it is to complete the voyage in twenty-four hours. She is called the C. M. Palmer. A large export and import business has been done in Tyne Dock, considerable quantities of coal and coke having been shipped. In the General Iron and Engine and Foundries Trade matters are getting very dull, stock-taking being the order of the day, and the Christmas holidays have already commenced in some instances.

The continuation of the war, and the generally unsettled state of European affairs, has a very depressing effect upon all branches of the iron trade, and no improvement can be expected until after the holidays and the settlement of the wages question. It is now confidently expected that the latter question will be settled amicably between the parties, with the valuable assistance of the Arbitration Board. It would, indeed, be suicidal policy on the part of the men if they offered any serious opposition to such a course at the present moment, as the demand for railway and all other kinds of iron is only very precarious, and may be expected to be for some time.

The New Biddick pit, lately sunk by Mr. Elliot, near the Victoria Bridge, on the Wear, is now working coal, and this place possesses some interest from the royalties it is likely to open out, and the problems at one time considered very difficult which are likely by the explorations made to be solved. About thirty years ago a new shaft was sunk at no great distance north-west from this pit, and much expense was incurred in passing through a quicksand; but when the shaft reached the depth at which excellent coal seams had been found and worked in the district no coal was found, the ground being broken and faulty, and it was supposed that the shaft had gone down on a fault, or a number of faults joined together. Drifts were cut out in different directions, but no coal (at least, of any value) was found, and ultimately the speculation was reluctantly abandoned. The workings from the shaft alluded to, however, will prove this ground, and the old shaft may possibly be useful in connection with the workings in future. A large tract of whole coal, too, left to the dip in the old and well-known Oxclose Colliery, will, it is expected, be reached and drained of water by this new winning, so that this winning, if all should prove successful, will ultimately prove of some consequence, looking at the tracts of coal lying to the north and west of it, and may also be of some consequence in getting the coal lying to the south and east, in the direction of Pensher, where the proprietor has another large coal work.

BRIDGES FOR CHINA.—The contract for the Yang-Iser-Foo, and other bridges for the Municipal Council of Shanghai, has been let to the London Engineering and Iron Shipbuilding Company (Limited), by Mr. Alfred Stansfield Rake, consulting engineer, of St. Nicholas'-buildings, Newcastle-on-Tyne, who has been retained in the interests of the Council for the preparation and supervision of these works.

REPORT FROM THE NORTH OF ENGLAND.

Middlesborough, Dec. 22.—The market at Middlesborough was well attended, but being so near the close of the year, which is holiday time and the stock-taking season of most firms, there was not much actual business done; prices were firm for pig-iron, and some few sales were made at full list rates. Makers are many of them heavily sold, and disinclined to book orders for pigs except at good rates. The production of pig metal is fully kept up, and notwithstanding that the manufactured iron departments are in a dull state for new business, the immense make of the Cleveland district—amounting, as we stated last week, to something like 1,750,000 tons per annum—is entirely absorbed, and considerable pressure is put upon some makers for delivery under existing contracts. There was a good enquiry yesterday, and, no doubt, with the turn of the year prices will still further improve. Stocks are still being reduced, that in warrant store at Middlesborough is now only 12,993 tons. The demand for rails is slow—indeed, this department is in a very depressed condition—few orders and very low prices. For shipbuilders' iron enquiry continues steady, the generality of the shipyards in the neighbourhood being fairly off for orders. Foundries are not over well stocked with orders, and the bar-iron trade is also much in want of fresh business.

The whole of the pits in the South Durham district are in full work, and making good fortnights. The vends are reported to be large, especially at those collieries drawing coal for coking purposes, and although the weather has been so unfavourable of late for shipping, none of the collieries have ceased to teem.

REPORT FROM SCOTLAND.

Dec. 21.—As might have been anticipated, with the entire absence for exportation, the market for Pig-Iron keeps steady at the quotations, with only a limited amount of transactions, both buyers and sellers being engaged examining into or making up the statistics of the year. We believe that the production will be found to have exceeded that of last year by something like 50,000 tons, but that the home consumption will have greatly exceeded that of last year, and will show a consumption of raw material far in advance of previous years. The average price of pig iron will also show an advance over the previous year, but the charge of working it will be found to have enhanced the price of production on account of higher wages having been paid, both to labourers and workmen. The total shipments of the week show a balance on the wrong side, being only 8835 tons, against the larger total of 10,060 tons in the corresponding week last year, which brings up the decrease in the shipments in the year to about 8500 tons—not a large decrease, considering the inimical character of the war on all commerce. During the week prices have scarcely changed, the cash quotations being 51s. 1½d. to 51s. 3d., and 51s. 6d. to 51s. 7d. thirty days. The market was quiet to-day, but a fair business was done at 51s. 1½d. to 51s. 2d. cash, closing buyers 51s. 1½d. cash, and 51s. 5d. a month; sellers 1d. higher. No. 1, g.m.b., 52s.; No. 3, 51s. 3d. Makers' iron, No. 1—Coltness, 61s.; Gartsherrie, 60s.; Shotts, 57s.; Calder, 59s.; Summerlee and Langloan, 55s.; Carnbroe, 54s. 6d.; Eglinton at Ardrossan, 52s. 6d. Deliveries continue, ex store, at about 400 tons per day.

Finished Iron has received no impulse favourable to those engaged in it, either as employers or employed, nor is it likely to be better circumstanced during the remaining week of the year. Anxious sellers make shy buyers, and as the year is just at a close few engagements of consequence will be entered into till the opening prices of 1871 are rendered apparent. In this locality melters are consuming a great quantity of the raw material, and the prospects of the next year, so far as these have been allowed to be developed, are quite cheering, sufficiently cheering to indicate a prospective full average business in Manufactured Iron. During the last two weeks very heavy shipments of sugar-making machinery have taken place to the West Indies.

An accident to the machinery which is employed in driving the large rolling mill at Mossend Works will throw a number of hands out of work for a month, but this will only be disastrous to the men themselves, and may help to prevent a strike.

Mr. George Anderson, M.P., arbiter between the puddlers of Scotland and their employers, has issued his final award, which recapitulates the three heads verbatim which appeared in the Journal on Dec. 3. In a lengthy note, Mr. Anderson states that both parties have sent in statements asking him to modify his proposed findings. These statements, he adds, consist to a large extent of a mere reiteration of the arguments previously used in the discussion, and were fully considered by him before issuing his notes, and, therefore, do not absolutely demand any further notice. After adverting at length to the points that have been stated in these representations, Mr. Anderson says that nothing has been brought forward in either reclaiming petition to induce him to modify his opinion, as previously expressed in his note of Nov. 25, 1870, and he repeats the hope that both parties will endeavour to meet each other in arranging some basis of amicable settlement for future differences. The finding, which has displeased both parties, is shortly this:—The puddlers are entitled to 6d. per ton "advance" on puddling from the date on which they resumed work after the lock-out in May; and the masters are entitled to a "reduction" of 6d. per ton on the extra 1s. per ton paid for doubling, from Aug. 8 last. We hope, with the arbiter, that some basis will be arranged for the amicable settlement of differences for the future. There is no change in quotations to note. The foreign and coastwise coal trade is fully an average, and prices of all kinds are maintained. During the week just ended the shipments reported from the Scotch ports were 29,340 tons, against 25,840 tons in the corresponding week of last year. In some instances the ironmasters, having reduced the number of their furnaces, are offering their surplus coals for sale, but still prices are keeping up to the advance, with a fair business doing. During the year about to close the quantity of coals produced has been beyond its predecessors, but prices were greatly unremunerative during the first 10 months of the year, and some difficulty was experienced with the miners, but no strike of importance occurred to leave its permanent impress on either of the districts. Colliers' wages, 3s. 9d. to 5s. per day.

A WEALTHY IRONMASTER.—The inventory of the personal estate of the late Mr George Baird, ironmaster (one of the partners of the Gartsherrie firm), has been made up by his executors, and the value of his movable estate in England and Scotland is 918,457*l.* 17s. 3d. This does not, of course, include his landed estates and funds in America, which are large. The value of the stamp on which the inventory is written is 13,400*l.* By his trust-deed, which is dated Dec. 3, 1868, and, along with two codicils, dated Jan. 15, 1870, recorded in the books of Council and Session Sept. 9 last, he conveys to trustees all his heritable and movable property, including his estates of Strichen, in Aberdeenshire, Haddon, Kalmflat, and Stonfield, in Roxburgh and Berwick shires, and Cunninghame, in Dumfriesshire. The purposes of the trust are declared to be for payment of his debts, for implement of his wife's provisions under her contract of marriage, dated Nov. 13, 1858. In the event of her surviving him, she is to receive 2000*l.* per annum, exempted from all duty, in addition to her jointure of 1500*l.*, and to be increased to 4000*l.* if any son or child he may have should die before majority. On his son, George

Alexander Baird, attaining majority, and being inclined to reside at Stitchell House, she is to be allowed 500*l.* per annum, in addition to her jointure, for her house rent. If she marries again, she forfeits all right to her provision, except her bare provisions under the contract. He leaves 25,000*l.*, at disposal of trustees, to be divided to such religious, benevolent, and charitable objects and purposes as they may deem most deserving, including contributions or annuities to any poor relatives. His estates of Stricken and Stitchell are to be entailed in favour of his son, George Alexander Baird, in the first instance. He provides 200,000*l.* to each younger son, and 50,000*l.* to each daughter. In the event of his son dying without heirs of his body, the residue of his estate is to be divided into 40 shares, which he leaves to his sisters and other relatives.

MONSTER BOILERS.—The other week the usually quiet station of Tillicoultry was put to some stir at the removal of a large steam-boiler, which was safely delivered at the works of Messrs. J. and R. Archibald, Devondale, and on Wednesday this stir was repeated by the arrival of another similar monster boiler, which was also safely delivered at the extensive works of Messrs. J. and D. Paton and Co. These boilers are excellent specimens of first-class workmanship, and we understand possess all the latest improvements of the day for economy in fuel and generating steam quickly, and in abundance. The boilers were made by Mr. W. Wilson, Lilybank Boiler Works, Glasgow, whose boilers are now numerous in this district, and from all accounts giving every satisfaction. We are always ready to welcome them, knowing that the greater their number the greater will be the demand for skilful and willing hands to work in connection with the machinery to which they supply the motive power. —*Dunfermline Saturday Post.*

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Dec. 22.—A steady trade is being done at the ironworks in the neighbourhood of Chesterfield and on the Erewash Valley line, where are the largest general works in the county. The foundries are kept well going in pipes and general castings. For House Coal there is a rather brisk demand from London, the rate to which by the Midland has been reduced 11d. per ton. Retail prices, however, have not been lowered to the metropolitan consumers, although the South Yorkshire colliery proprietors continue to sell at a reduction of 2*s.* per ton. There is not so much doing in Steam Coal as there has been, the shipments from Grimsby to Russian ports having ceased. A large quantity of ironstone is now being imported into the district—the manufacture of pig-iron, large as it has been recently, is still on the increase.

Nearly all branches of the Sheffield trades are now doing well, and this being what is termed "Bull week," more than usual activity has been shown in clearing off orders as fast as possible. The armour-plate and other mills are in full operation, and it is evident that they will have a long and a very busy season of activity, for defensive and offensive shields for land and water are certain to be in great request, not only for our own use but for other continental powers—gun-barrels, blocks, and everything connected with warlike material. Manufacturers of rails, locomotive and other railway necessaries, have been busy for a long time past. Russia, in extending her system, not so much for the benefit of her inhabitants, in all probability, as for military and strategical reasons, has been about the best customer; and there are still orders in hand for spring delivery, although it is expected that goods will be shipped to Revel direct—an open port—and thence into the interior, or to St. Peterburg, if required by the new line of railway which was completed a few weeks since. There is more doing in cutlery than for some time past, and some few orders have been given out for cheap spring knives—a class of goods which up to the commencement of the war were largely manufactured in Germany. The Bessemer steel works are still very busy, and almost every description of goods for which it is adapted are being largely produced.

The collieries in South Yorkshire are being fully worked, there being a very fair business doing in house coal. A considerable tonnage is being sent from the district to London, but as the 2*s.* per ton reduction is still in force the profits realised may be represented as *nil*. It is, however, not at all unlikely but what some important change will take place before long with regard to the tonnage rate. The Great Northern and the Midland having both made the same reduction, the advantage, of course, still rests with the Derbyshire coalowners, whose rate to the metropolis will be from 1*s.* 4*d.* to 1*s.* 9*d.* per ton less than from South Yorkshire. During the last six years the difference in the rate has led to a loss of trade to London from the last-named district of more than 200,000 tons of coal yearly. To recover that serious loss the rates by the two companies must be equalised, or very nearly so. There is no change with regard to steam coal, the business in which to Hull has been well maintained for the season. About an average quantity of coal is being sent into Lancashire. The ironworks in Lincolnshire are now very busy, in consequence of which a great deal of coal and coke is being sent there from the neighbourhood of Barnsley.

Some double machine puddling-furnaces, invented by Mr. James Whitham, of Leeds, and for some time past worked by him at the Perseverance Works in Leeds, have proved quite successful. While these furnaces greatly increase the produce of iron, they considerably lessen the labour of the workmen, at the same time allowing each puddler to earn 30 per cent. more wages than he could under the old system. By the adoption of these furnaces, too, 40 per cent. of fuel is saved, and at the same time there is a proportionate consumption of smoke. This last mentioned fact suggests the anticipation that the day may not be far distant when it will be practicable to burn all smoke made at ironworks.

LARGE OUTPUT OF COAL AT THE MESSRS. BRIGGS' COLLIERIES AT NORMANTON.—The red-letter day at the Industrial Partnership Collieries of Henry Briggs, Son, and Co., Whitwood, has been entirely superseded by a still larger output of coal from the same pit, recorded by us some few weeks ago. It was thought by the engineers and the workmen that they should like to test thoroughly the capabilities of the pit in question, which so recently drew 1006 tons to bank in nine and a half hours; it was, therefore, arranged that Wednesday should be the trial day, to see what quantity really could be sent to bank in one day. Accordingly, the pits on that day commenced to draw coal at 6 A.M., and finished the day's work at 5.30 P.M., half-an-hour being allowed for dinner. This completely threw the former output into the shade, the quantity raised being 1483 tons 12 cwts.

Account of the Coal Drawn out of the Normanton Pit on Dec. 21:—

	Ropes pulled, containing two corves.	Raised.
6 A.M. to 12 A.M.	818	752*t.* 14*c.*
12 A.M. to ½ past 5 P.M.	766	730 18
Total	1584	1483 12

This is the largest output recorded of any pit pulling but two corves on each rope. At one part of the day's proceedings as much as 160 tons were raised by the engines per hour. These engines were made by the well-known firm of Davy Brothers, Sheffield. The managing director of these collieries, Mr. A. Briggs, has spared no pains in endeavouring to make these collieries as good as any in the district, it, adopting from time to time any improvements for the carrying out of these extensive works. Everything that the engineers of the company, Messrs. Bruton and Robson, could devise for the safety and regularity of the day's operations were successfully carried out without the least accident, and one cannot fail to admire the manner in which these collieries are conducted.

THE COAL RATE BY RAILWAY TO LONDON.

A highly influential meeting of the coalowners of South Yorkshire was held on Saturday, at the King's Head Hotel, Barnsley, to consider the present position of the London trade, so far as related to the rate by the Great Northern Railway Company. Amongst those present were Mr. R. Baxter (of the firm of Baxter, Rose, and Norton, London), Wharncliffe Silkstone; Mr. C. Bartholomew, Wombwell Main; Mr. Crofts and Mr. Batty, Darley Main and Pinder Oaks; Mr. Warrington and Mr. Miller, Strafford Main; Mr. O. Walker, Wharncliffe; Mr. T. Dymond, the Oaks; Mr. Stewart and Mr. Ryecroft, Lund Hill; Mr. J. Mitchell, Edmunds and Swaithe Main Collieries; Mr. Huntriss, jun., Darfield Main, &c.

Mr. BARTHOLOMEW took the chair, and briefly noticed the object for which the meeting had been convened—the rate paid to the Great Northern for the conveyance of coal from South Yorkshire to London. Some discussion then took place, when it was stated that a communication had been sent to the colliery proprietors from the Great Northern Company, as follows:—

Mineral Manager's Office, Dec. 18.—In consequence of the reduction in the rate for the carriage of coal from the Derbyshire collieries, as announced by the Midland Company, I have to inform you that a drawback of 11d. per ton will be allowed on the present rates from your collieries, *via* Doncaster, to the places named on the other side, this dating from the 1st inst.—J. W. NEWTON.

The places referred to were King's Cross, Holloway, Finsbury, Hornsey, Woodgreen, Crouch End, Highgate, stations on the North London Railway, Great Eastern London depôts, and stations on the London, Brighton, and South Coast, London, Chatham, and Dover, and South-Western Railways.

Some of those present remarked that as the agreement entered into a few years since between the Great Northern and Midland Companies was now at an end, having been broken by both, the former was now in a position to grant such a scale as would enable the South Yorkshire owners to compete for the London trade with those in Derbyshire. The reduction of 11d. per ton, the same as was made by the Midland, placed them in exactly the same position they were in before, so that now the rate was from 1*s.* 4*d.* to 1*s.* 9*d.* per ton in favour of the Derbyshire coalowners.

Mr. R. BAXTER then addressed the meeting, pointing out the benefits which the colliery proprietors of South Yorkshire would derive in the event of the South Yorkshire Coalowners' Associated London Railway being carried. The line would be entirely a mineral one, and as the gradients were very easy the cost would be small (6000*l.* a mile for a single line, it was said). There would be an independent line, and there would be a rate which would allow of their being in a position to compete with other districts for the London trade.

Some conversation then took place relative to the probable quantity of coal which, in the event of the new line being completed, would be sent over. During the last four years it appeared that the quantity sent over the Great Northern to London had fallen off from more than 400,000 tons to rather less than 200,000 tons, and which was entirely owing to the rate charged by the Great Northern. The further consideration of the matter was deferred to another meeting, which is to be held to-day at Doncaster.

The general feeling, it may be said, was that, unless the Great Northern gave a rate something like what was given by the Midland Company from Derbyshire, it would be the duty of the coalowners of South Yorkshire to aid in every way the new line of railway, the Bill for which the promoters seem sanguine of being able to carry through the House of Commons, one of the strong arguments in its favour being the falling off in the London trade, from the cause named.

REPORT FROM MONMOUTH AND SOUTH WALES.

Dec. 22.—Considering all the marring circumstances that have been brought to bear against the progress of business, the present condition of all branches of industry in this district is, to a large extent, satisfactory. For railway iron the demand is not at present large, the only appreciable enquiry being from the United States markets, and latterly some large clearances have been made in that direction, but more might be done at the rail-mills. Prices for this description are scarcely so firm as might be desired, but there is no disposition to submit to a serious reduction, and makers are evidently anxious to keep up the wages of their workmen. There is a tolerably strong belief entertained that the new year will bring with it some improvement in business. Buyers who have suspended transactions for a long time past, in consequence of the disturbed state of the Continent, are expected to enter the markets again in the course of a few weeks, and as stocks abroad are known to be getting short, a better state of things may be looked forward to. In anticipation of this change, operations in many departments of the works are kept particularly active. The position of the Tin-plate Trade is without alteration.

It would not be a matter of surprise if a degree of slackness were observable in the Steam Coal Trade at the end of the year, but owing to the good demand which has been kept up from the distant mail packet stations, the South American ports, and the markets of British India, colliery proprietors are still enabled to keep their pits about two-thirds employed. Next week being Christmas week, some holiday making will, no doubt, be indulged in, so that at both at the pits and at the ports operations will be less active. House coal colliery proprietors are doing about the same amount of business as last week; but with the seasonable change which has taken place in the weather, it is probable that there will be an increase in the demand during the next week or two.

An order has been made by the Master of the Rolls for the winding-up of the Hirwain Coal and Iron Company (Limited), but it is understood that strenuous efforts are being made to resuscitate the company, and one meeting has been held, at which proposals were made to carry out the same. These were considered satisfactory, and an adjourned meeting will be held, in order to confirm the proposals. In the event of these being finally adopted it is believed that the collieries will shortly be in full work again.

For some time past negociations have been in progress for the purchase of the Nant-y-Glo Works and property of the Messrs. J. and C. Bailey by the parties who have recently purchased the Blaina Ironworks. Whether the negociations will lead to a successful issue is not yet known, but it is deemed probable that if the gentlemen who form the Blaina Iron and Coal Company (Limited) are not able to offer satisfactory terms the Nant-y-Glo Works will not long remain in the hands of the Messrs. J. and C. Bailey. Mr. Crawshay Bailey's advanced age, and the indisposition of Sir Joseph Bailey to continue his active connection with the iron trade, are the reasons assigned for the disposal of the works. Few men have played such an important part in the progress of the iron trade in this district as the Bailey family, and the handsome fortunes realised by them all is evidence of the success with which they have carried on the various works they have been so long connected with.

Vice-Chancellor Bacon has granted an order for the winding-up of the South Wales and Great Western Direct Railway Company, better known as the promoters of the High Level Bridge scheme over the Severn. A warrant of abandonment of the line had been before obtained by the petitioner.

The case of Starling *v.* the Blaina Iron and Coal Company (Limited), came before the Court of Exchequer on Monday. Plaintiff, a metal broker, claimed 130*l.* 5*s.* commission for orders which he alleged he had obtained for the company. The plaintiff had been acquainted with Mr. Clarke, the managing director of the Blaina Company, since the formation of the concern, and he had had many transactions with them. In January last he received a letter from Mr. Clarke, stating that they were out of American orders, and requesting plaintiff to procure some for them. Plaintiff then made a contract with Mr. Gideon H. Smith, a large buyer on American account, for 2000 tons of rails, at 6*l.* 10*s.* per ton, delivered at Newport. Mr. Clarke declined to accept 6*l.* 10*s.* per ton, and the plaintiff then discovered that a Mr. Buchanan, another metal broker, had been commissioned by the company to treat for the same order. The contract was ultimately concluded with Mr. Smith for 6*l.* 15*s.* per ton; 1 per cent. commission, and 2½ per cent. discount, to be paid to the purchaser. Mr. Joseph Robinson, of the Ebbw Vale Company, Mr. J. B. Thomas, and Mr. Jos. Taylor were examined to show the custom of the trade in reference to commission agents. The Lord Chief Baron, in summing up, said it was clear that the plaintiff was the first to introduce Mr. Gideon Smith to the defendants. The jury at first disagreed, 11 being in favour of a verdict for the plaintiff; ultimately, however, the 12 agreed to a verdict for the plaintiff.

The arrivals at Swansea include—The Refuge, from Port Nolloth, with 437 tons of copper ore, for Richardson and Co.; Anna, from Bilboa, with 200 tons of iron ore, for Forester and Co.; Jeune Prosper, from Bilboa, with 168 tons of iron ore, for Holway Brothers; Connetable de Cilsson, from Bilboa, with 135 tons of iron ore, to order; Marianne, from Santander, with 180 tons of iron ore, for Richardson and Co.; Pensee, from Bilboa, with 140 tons of iron ore, for T. Wood and Co.; Rosalie, from Bilboa, with 100 tons of iron ore for Holway Brothers; Louise Desiree, from Bilboa, with 160 tons of iron ore, to order; Saturne, from Bilboa, with 220 tons of iron ore, to order; Sketty Belle, from Genoa, with 311 tons of zinc ore, for H. Bath and Son; Juliette, from Bilboa, with 226 tons of iron ore, for Holway Brothers; Francisco, from Carioforte, with 800 tons of zinc ore, for H. Bath and Son; Marie Angelina, from Santander, with 222 tons of iron ore, to order; Titania, from Huelva, with 280 tons of pyrites and 100 tons of copper ore, for James Strick; Anne Dymes, from Carizal, with 530 tons of copper regulus, for H. Bath and Son; Giorgina, from Genoa, with 755 tons of copper ore, and 41 tons of lead ore, for H. Bath and Son.

A FEW MINING NOTES.

BY J. Y. WATSON, F.G.S.

PRINCE OF WALES, AND THE SILVER LODE.—In order properly to understand the silver question which Mr. Hitchins and myself visited the mine to look into on the 17th, it will be necessary to observe that forty or fifty years ago large quantities of silver were raised in the ground to the south of the Prince of Wales and West Prince of Wales setts. I have heard the amount stated at from 100,000*l.* to 200,000*l.*, but cannot vouch for its accuracy. The mines from which this silver was chiefly raised were Wheal Brothers, Wheal Sisters, Silver Valley, Old Harrowbarrow, and Harrowbarrow Consols. The shares in all of them went to an enormous price, and created such a furor for silver mining that the end of it all was a loss of hundreds of thousands of pounds, and utter ruin to many of those who had given such extravagant premiums for their shares. The mines although yielding very rich bunches of silver, did not pay for any length of time, and were "one and all" abandoned. And here let me observe that I have, myself, no faith whatever in silver mining in Cornwall or Devon *per se*. But if a lode of silver is discovered for you, and you have nothing to do but to work it at a profit, it is not a bad adjunct; and this, we believe, we now have at the Prince of Wales.

Parts of Wheal Sisters and Harrowbarrow Consols are included in the Prince of Wales grant, which is a very large one, and are to the south of the copper lodes. Part of Wheal Sisters is also in the sett formerly called South Prince of Wales, and now the Queen. This grant has also the Old Harrowbarrow, and upon the old shaft of that mine an engine has just been erected. Some months ago, a shaft was sunk in South Prince of Wales, close to the boundary of the Prince of Wales sett, and from this shaft and a few fathoms from it over 2000*l.* worth of silver, I am assured, have been raised. Capt. Knott showed me one stone of silver worth 40*l.*, which was broken within 5 *feet* of the boundary of Prince of Wales, and between the end from which this stone was broken and our boundary there are 4 feet of lode still standing. To work this lode deeper and effectually by the Queen company, it is necessary for them to bring up an adit which will come under the shaft 20 or 30 fathoms deeper than the present workings, but this cannot be done without *passing under two fields belonging to the Prince of Wales.* After, therefore, looking at the question in all its bearings, Mr. Hitchins and myself came to certain conclusions, which I embodied in a Memorandum of Agreement, and this was at once adopted, and signed by Mr. Criper, as director, and on behalf of the Queen Company, and by Mr. Hitchins, as secretary of the Prince of Wales. By this agreement we allow the Queen Company to continue their adit through our two fields for 7 feet high, at their own cost but they are to have any silver found in the said drivage, and to continue it up to the shaft. Prince of Wales to have the use of the shaft, and also of the level to enable them to drive an adit at same depth if they require it.

For this concession on the part of the Prince of Wales Company, the Queen Company are to strip down *at once* the 4 feet of lode standing up to our boundary, and we are then to have the use of the shaft, drive upon the silver lode at once, and work it as far as we require, by means of the said shaft, by payment of 3*d.* per ton for ore raised. We have also liberty to deposit the attle. These are the main features of the arrangement we have made; and without wishing in any way to excite hopes that may never be realised, I o to observe that it is the opinion of many of the Queen party tha main part of the silver deposit is in Prince of Wales; and Ca Knott told me, after all was settled, that he wished us success, he thought we should find something *extraordinary*. I hope we n but at any rate, we have no occasion to spend money *in explor* we shall simply commence driving on the lode, and return what s we find in it at the mere cost of manual labour.—Since these rem were written, Capt. Gifford reports that the shaft will be ready him to commence upon the silver on Tuesday next.

At the copper mine the prospects are improving. The 77 wo coming under where the lode was rich above, and has very rich copper in the end. A winze coming down over this end, from th is worth 15*l.* per fathom; the 77 east is worth 14*l.* per fathom tin, and 5*l.* per fathom for copper. About 50 tons of tinstuff h been raised here, and when we have a little more we may ere small water-wheel and 12 heads of stamps to return it. The 55 and 65 east are pioneer levels, and both going into good ground. next sampling will be 90 tons of good ore; and in reference to serves—which I made it my study to ascertain as nearly as possibl the 77 has been driven altogether east and west 55 fms., and altho the ends have not been rich, a winze going down from the 65 w over the extreme end in the 77, is worth 15*l.* per fathom, and a st in the east end, 6*l.* to 8*l.* And taking this piece of ground betw the 65 and 75, for 55 fms. long, at a moderate estimate, and the still standing in other parts of the mine, Mr. Hitchins and Capt Gifford both value the reserves at from 7000*l.* to 8000*l.* Capt. Jos Thomas will inspect the mine and report upon the tin in the mun on Monday.

WEST PRINCE OF WALES is a remarkably fine sett, with two lo opened upon; but unfortunately the engine—a 20-in. and 38-in. co bined—has been overpowered by a quantity of water never anti pated on such a hill; and to remedy it it will be necessary to in another boiler and larger pitwork, which will involve an out of about 300*l.*, and that the mine is well worthy of it there can be two opinions. In a valley, about 50 fms. from the shaft, there an adit and some old workings, from which a good deal of tin w formerly taken. The same lode lately cut through, 58 fms. from s face, and worth 11*l.* per fathom for tin, will come under this old ad 40 fms. deeper, and is in itself a fine speculation.

DEVON GREAT CONSOLS.—I called here on my way to West Mar and was glad to hear that the prospects had materially improved the south lode, and that with a better price for copper the good o mine may again do well.

NEW VICTORIA (South Devon).—Many readers of the *Mini Journal* will remember how, a few years ago, the Arundel Conso Mines, near Ashburton, were to rival Devon Great Consols, and c tainly an extraordinarily large and promising gossan lode was di covered there, but was never properly developed, either by that co pany, by the New Devon, or by the Druid Companies, which succeed each other, and were all beat by having too small an engine to ke the water. Altogether, as I understand, these companies have spe over 30,000*l.* on surface works and shallow levels. When the Dru Company was drowned out the whole concern was purchased by t present company—the New Victoria—and a large engine (56-inch erected, which keeps the water going about four strokes a minut and is capable of carrying the works to a great depth. This engin with excellent pitwork, is now in full operation, and the mine clea and as Mr. Hitchins was engaged to inspect the mine I accompani him. There are two main, or principal lodes—the north, which 36 ft. wide; and the south, 32 ft.—both underlying south, but one much faster than the other that they will form a junction a fe fathoms deeper, and this is a very important point. The south lod yields an enormous quantity of mundic, interspersed with copper or and has been explored 66 fathoms deep; the east end containi mundic, and some good copper ore. From this lode about 50 tons o the former and 120 tons of the latter have been sold. The nort lode has been sunk 96 fathoms deep, and is an enormous lode, full o mundic, which it is said "always rides a good horse," and stones copper ore. From this depth (the 96) a cross-cut is to intersect th south lode 30 fathoms deeper than it has yet been seen in abou three months. This is another very important point. The ma chinery, besides the large engine referred to, consists of a 60-ft. wate wheel and a steam-whim. The mine is held under lease, 19 year unexpired, at a royalty of 1-20th, and while the old companies l boured under the disadvantage of a heavy carriage of about 11*s.* p ton, the opening of the railway to Ashburton will reduce it to abou 1*s.* per ton. Altogether, Mr. Hitchins was favourably impressed wit the mine, and believes in time it may become a great success. As i is not known in the market, and the shares are well held by privat gentlemen of good means and position, I may add that it is in 20,00 shares, limited to 1*l.* each, and that 15,000 have been issued full paid up. The other 5000 are kept in reserve, in case at any tim further capital should be required.

WEST MARIA AND FORTESCUE is looking better; the 70 end eas is worth 25*l.* per fm. The sampling for two months will be 300 ton of good ore, and a quantity of mundic. A few months ago the share here were depreciated more than 50 per cent. by a report that th company would probably be involved in a Chancery suit; and no being able to learn in London the exact nature of the dispute betwee the agents and the lord, I thought I would go to the mine and ascer tain all about it for myself. The setts consist of two grants, on from Lord Fortescue and one from Mr. Willesford. The engine-shaft is in Mr. Willesford's ground, and, when the chief workings of th mine entered Lord Fortescue's right Mr. Willesford claimed a com pensation per ton for all ores drawn through his shaft, and for attl which might be thrown on his land. This seemed to me not only usual, but fair and reasonable, and I expressed my astonishment to the resident agent that it should ever be disputed, or that men usually so cautious as the Scotch (the management is entirely in Glasgow) should allow themselves to be drawn into a lawsuit, which can only injure the mine, and benefit the lawyers; and the more I investigated the matter the more I became impressed with this astonishment.

More than 12 months ago, when Mr. Willesford learnt that the ore from Lord Fortescue's land was brought up his shaft, he wrote the manager, Capt. Skewis, stating he should require compensation for it, and requested that *his letter might be laid before the shareholders.* The agent and directors, as it would seem, set him at defiance, and, after waiting many months in vain, he filed a bill in Chancery against them; and this bill the managers in Scotland are defending. I have heard a dozen different stories in defence of the management—one that 2000*l.* were given Mr. Willesford for the use of this shaft; an other that the mines, West Maria and Fortescue, were by the lease to be worked *jointly*, and that the latter *implied* that the ore from Fortescue should be brought up Maria shaft, &c. But, in regard to the first statement, I am assured on the best authority that the 2000*l.* was simply paid for the purchase of half the royalties, and for this reason. The mine had been held for 17 years, and scarcely anything done upon it. Mr. Willesford refused to grant a fresh lease unless the mine *were thoroughly worked*, and to induce this he granted it at 1-30th instead of 1-15th dues, on receipt of 2000*l.* The working of the mine jointly, I am assured also, never referred to the matter in dispute. I have good reason to know, further, that Mr. Willesford is ready, and has ever been ready, to meet the shareholders in a fair and liberal spirit. All he requires is an acknowledgement of his right, a small amount per ton on the ores brought up his shaft from Lord Fortescue's land, and compensation for surface damage through depositing rubbish on his land. The amount per ton, and the compensation for land, he would leave to be decided by any fair and disinterested agent; and what more can the shareholders require? For my own part, as a large shareholder, I protest against these law proceedings, when the whole matter can be settled fairly and justly, and to the advantage of both parties in half an hour, by any reasonable man. The mine is becoming an important one, and will soon pay good profits. Are we to spend these profits in useless and expensive litigation, or will the shareholders join in protesting against it?

NEW GREAT CONSOLS, it is reported, has acquired a valuable addition to their present sett, in a new piece of ground adjoining. Many mining parties have applied for it, but it has been decided, and I think very justly, in favour of the New Great Consols Company. Good lodes are known to exist in the new property.

Original Correspondence.

THE FRONTINO AND BOLIVIA MINING COMPANY.

SIR,—As the directors of the Frontino and Bolivia Company have thought fit to refer to the retirement of Mr. Rutter and myself from the board of that company, and in doing so to invest the statement with language calculated to create a false impression in the minds of the shareholders, I beg leave to place the simple facts before them, in justice to myself and to my colleague.

It is stated that we retired from the board without giving notice to the remaining directors, and that I, in my capacity of managing director, during provided the company with offices our retirement was productive of such serious consequences as at one time to threaten the existence of the company. As these statements would read very much as if we had summarily ejected, not only the directors, but also the books and papers of the company, it is with the view of conveying an accurate and not a false impression, and with not the slightest intention of discussing the company's affairs, that I request insertion of these remarks.

It was on Nov. 8 that Mr. Rutter and myself wrote to the board that we felt we could no longer occupy a false position, and were obliged, in justice to ourselves to resign our seats, at the same time regretting that we had no other alternative, since opinions earnestly expressed had been disregarded, and further that we were actuated solely by the conviction (then become a certainty) that we had ceased to be of practical utility, and that the interests of the company and common honesty required us to retire from so anomalous a position. The Articles of Association provide a certain form for the retirement of directors, which form we, of course, were bound to adopt, and we, therefore, gave (as I presume any men of business similarly placed would have given) notice of our retirement in manner and form prescribed by the Articles of Association.

This was on Nov. 8, and our monthly communication to New Granada had been written and dispatched. The Chairman was then distinctly told that although we could not take part in the deliberations of the board, yet anything that could be done by myself or my staff towards assisting the company would be cheerfully accorded; and further, that they might still have the use of the office as long as they pleased gratuitously, an accommodation of which they availed themselves as long as it suited them (more than three weeks), in the face of the inference they endeavour to convey to the contrary.

With respect to the assertion that our retirement was productive of serious consequences tothe company, it may be naturally asked what were those serious consequences, and in what manner could they possibly arise? The remaining directors were left (owing to our forethought alone) legally competent to act, and we, being in a minority, could in no way influence, either for good or for evil, the fortunes of the undertaking. We again repeat, that we could no longer occupy such a position, and we, therefore, adopted the only alternative that was left us.

HENRY L. PHILLIPS,
Late Managing Director of the Frontino and Bolivia Company.
19, *Warrington Crescent, Hyde Park, W.*

NEW GREAT CONSOLS.

SIR,—The expense of breaking the tinstuff at this mine is less than 6s. per ton; to this we add 6s. or 7s. per ton more, I think it will be ample to make the tin fit for the smelter, and the sale of the arsenic soot will be a set-off against the expense of burning. I have known quantities of tin whits having to be burnt for 12 or 15 hours, then partially dressed, and returned to the burning-house a second time before the tin could be made clean. To treat tinstuff of this character I think it will be advantageous to burn it in the stone before putting it to the stamps; it will be less in quantity, and more free to work under the heads.

The tinstuff broken in the Carleen part of Wheal Ver when I was a boy, I believe, was quite as foul in arsenic as the New Great Consols is, and no sale for it at that time. Even if the average yield of tin from the whole mine be less by several pounds to the ton of stuff than stated by Capt. Pryor a short time since to be the average produce of the stuff broken from the stopes, I think there is a fair margin for a profitable mine as soon as their dressing appliances are in working order.—*Beddgelert, Carnarvon, Dec.* 20. J. T. PHILLIPS.

[For remainder of Original Correspondence see this day's Supplement.]

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

Camborne, Dec. 22.—The mining market has been firm during the week, considering the time of the year, which is generally dull, owing to the near approach of Christmas. The principal dealings have been in Cook's Kitchen, Tincroft, East Lovell, North Crofty, South Condurrow, South Frances, South Carn Brea, East Caradon, New Lovell, and Great Wheal Vor. Cook's Kitchen firm, 18 to 18¼; the mine continues to look well. Tincroft, 44 to 44½, firm. East Lovell, 28½ to 29; these shares have had a rise from 25, owing to an improvement in the engine-shaft at the 70, worth from 400*l.* to 500*l.* per fathom, and at the Puffer shaft 20 fms. from surface worth 100*l.* per fathom; these points show the tin ground to be extending, and when opened up will enable them to increase the returns of tin, also lay open reserves for the future working of the mine. North Crofty, 30s. to 35s., firm; this mine is also improving at different points; the shares ought to be bought at present prices for a rise. South Condurrow, 3 to 3¼; this mine is improving, and shares must go much higher in price soon. They sold on Wednesday tin for a fortnight, from 800*l.* to 900*l.* worth. South Frances, 29 to 30. South Carn Brea, 15s. to 20s.; this mine is situated in a good mineral district, and shares should be bought at once, as the present prospects are very encouraging; and from reliable information, they have a good improvement for copper in the bottom of the shaft. New Lovell shares in demand at 30s. to 35s. Metals are firm, at prices quoted last week.

BRENTOR MINE, which a short time ago was partially worked, but stopped, owing to an attempt to work it by a portable engine which proved quite inadequate to the power requisite for its proper development, is, I hear, about to be re-worked. This property has been reported on by many of our best mining authorities, amongst whom are Capt. James Richards, of Devon Great Consols, and Capts. Goldsworthy and George, of Wheal Betsey, all men whose opinions are to be relied on, all agreeing that the sett contains a very large, masterly lode, carrying strong iron and mundic, mixed with a beautiful gossan. The shaft was sunk 14 fms., the quantity of copper increasing with every foot sunk, giving ample proof of being well worthy of a spirited trial. I would here remark that the use of portable engines for this kind of work always proves a mistake, being a greater friend to the coal and tallow merchants than to the shareholders.

KING ARTHUR (Tintagel).—Some samples of ore from the workings have been placed in the hands of Mr. F. Claudet for examination and assay. All of them are highly argentiferous, and the following is the satisfactory result:—No. 1, brown gossan, oxide of iron, and sulphate of lead; lead, 33 per cent.; copper, 1·10 per cent.; silver, 6 ozs. 14 dwts. per ton of ore. No. 2, galena, with gossan; lead, 61 per cent.; silver, 25 ozs. 10 dwts. per ton of ore. No. 3, galena, with gossan; lead, 65 per cent.; silver, 28 ozs 15 dwts. per ton of ore. No. 4, galena, with gossan; lead, 53 per cent.; copper, 2 per cent.; silver, 15 ozs. 4 dwts. per ton of ore. No. 5, copper pyrites; copper, 7·10 per cent.; silver, 2 ozs. 9 dwts. per ton of ore. These results show the richness in silver of the minerals in this mine, and is an indication of the returns likely to accrue to the adventurers when the mine is explored in depth. At present the workings are confined to an adit on the top of one of the lodes, lead from which has been sold at 16*l.* 5*s.* per ton, and the gossan which surrounded it for 3*l.* per ton. The latest report from the mine states the lode is daily improving in value.

At the starting of the engine at the QUEEN MINE a splendid stone of silver was shown, supposed to be worth 50*l.*, and which had been raised within 4 ft. of the Prince of Wales Mine boundary—where operations are commenced, which will, no doubt, greatly enhance the value of this mine.

ABERDAUNANT, of the many new mines on the Van lode, has been the first to send ore to market, a first and second parcel of lead have already been sold, a third is nearly ready, and others may be expected to follow rapidly. The lodes are of enormous width, and present all the characteristics of the best parts of the Van, and give every prospect of very handsome returns to the shareholders.

TERRAS TIN MINE.—The accounts from this mine continue highly satisfactory. Capt. Rickard, who has been appointed in place of Capt. Edwards (now elected to a more remunerative employ), states his perfect confidence that the Terras will ere long become a great prize. The returns of tin for November and December will be quite equal to previous sales, and would have been much greater had the weather permitted. Continued heavy rains, too, have prevented operations on Edwards's lode, it being found impossible to keep the water by hand labour; this, however, will cease when the season alters, and the works there will be resumed. The stone-breaker does its work well, and the stamps can be kept fully supplied, a desideratum that could not be kept up when hand labour had to be relied on. It was found impossible, even by employing female labour, to procure hands sufficient to break the hard elvan so as to keep 48 heads going. Not unfrequently not more than 12 to 20 heads would be running. For some time no preparations had been made for dressing the slimes; that, too, is now being remedied. None of the rich tin from Edwards's lode has been returned. Measures are now being taken to have the additional machinery erected, so as to develope the north lodes (Edwards's and the caunter, both rich for tin), and to put in the new stamps, when the Terras will take a distinguished position, despite the opinions of envy, hatred, and malice.

EAST TERRAS (Tin).—I find, on reference to my notes, that I inspected this property in the year 1857, in company with the late Capt. Wilson Richards, of Redruth, formerly of Tresavean, Basset, and many other celebrated mines, and that my opinion was expressed in the highest terms. I was so impressed with the value of the locality, having examined the district, that I made an offer to re-work the Blencowe Mine, but that, as well as the now East Terras, could not be granted. I did, however, succeed in obtaining a grant, and forming a company for the sett west of the now Great Terras from the landlords as the East Terras has been granted by, and worked it for some time by the Wheal Marshall. A large quantity of tin and several parcels of copper ore were raised and sold, but owing to the gross misconduct of the manager who succeeded me the principal shareholders became disgusted, and the affair failed, not from want of mineral, but from want of confidence. Subsequent examinations have confirmed me in the high opinion I had previously formed, and are now being fully realised at the Terras Mine. I am heartily glad to find such success dawning there, as I believe I was the first agent called on to give an opinion on the great elvan; at all events, not many cart loads had been quarried on my visit; no proof could be more satisfactory than that displayed on a vanning shovel. The East Terras sett contains the north lodes and cross-courses of the Terras Mine, as well as a stanniferous elvan dyke. My advice to the proprietors is to do as they are doing in the other mine, and they will do quite as well. There are three east and west lodes within a few fathoms of each other, which may be commanded by one principal shaft. You may depend that when you have secured the shafts, and cleared out the adit and the levels driven on the course of the lodes you will find plenty of tin in the bottoms left by the old men, for the very substantial reason that they could not combat the water, especially at the lode called Edwards's lode in the Terras, in which a splendid discovery has been made running directly into your sett.

The neighbourhood of Calstock was rendered more than usually active on Tuesday by the starting of an engine at the Queen Silver-Lead Mine. Mrs. Barnard, wife of Mr. T. J. Barnard, of Tamar House, performed the christening ceremony with unusual *eclat*. The engine is a 30-inch cylinder, of double-acting power, and was constructed by Messrs. Nicholls, Matthews, and Co., of Tavistock. A meeting of the shareholders was also held, when the agreeable duty was performed of declaring a dividend of 1s. per share on 15,000 shares. An excellent dinner was afterwards provided at the Bedford Hotel, Tavistock.

TREVARRACK.—Capt. Pope, the manager, reports considerable improvement in this mine. All information can be readily obtained at the office.

At BRONFLOYD, on Friday last, a most promising discovery of lead was made by cross-cutting the south lode north of No. 1 shaft. This discovery is about 190 fms. east of the ground from whence the large and steadily-increasing returns of the mine are now made—nearly eighteen years having elapsed since any ore was raised from No. 1 shaft. On the creation of the extra capital in July last, for the special purposes of adopting a wider range of operations, the resumption of this shaft in the Church property, known as No. 1, was the first object of the executive; it is now 36 fms. deep, sunk on, or rather under, the dip of the south lode, carrying the footwall only in the shaft; the lode is now being cut through at that depth to the north or hanging wall, and this discovery has resulted, and if it holds on the company will have a much more extended field for operations—in fact, it will be like the possession of a new mine. The advantages contemplated to result from the possession of means to carry on this extended development of the champion lodes of the sett without disturbing the profits of the old mine appear very quickly to be fulfilled, and not alone so at this particular point, but bid fair to be equally successful at 40 fms. deep, about 290 fms. west of No. 1 shaft, and beyond the point where the three lodes of the sett were supposed to be consolidated into one. Here a new shaft (No. 4) has been started; it is already down 13½ fms., and the 40 fm. level of the old mine is being driven forward with all speed to meet the shaft when down about 50 fms. west of present end. Until lately this level has been in very disruptured ground, attributed to the crossing or junction of the north and south lodes at about this point; but the lode is now more mineralised, and spots of ore are occasionally met with.

SOUTH CONDURROW.—A correspondent writes—"This mine still continues to improve, and sold, on the 21st inst., 11 tons 13 cwts. 2 qrs. 17 lbs. of tin, at 73*l.* 10*s.*, realising 858*l.* 13*s.* 6*d.*, which, added to the amount of their last sale, on the 7th inst., amounting to 936*l.* 18*s.* 6*d.*, makes a total of 1795*l.* 12*s.* The 71 fathom level west has improved, and is now worth about 30*l.* per fathom. This level is now within 6 fms. of the winze sunk under the 61, where such rich racks of tin were met with in the last sinking, and which was prevented from being sunk further by an influx of water. The 71 and 82 fm. levels will soon drain this point, and render available that which appears to be the richest point yet met with in the mine. It will be observed that the above sum, when added to the credit balance carried over from the last meeting, leaves no doubt but that a very good dividend will be declared at their next meeting, and from the exceedingly favourable appearance, fully justify the assertion that it will be a permanent dividend-paying mine."

SOUTH WALES INSTITUTE OF ENGINEERS.

The annual meeting of the Institute was held at the Temperance Hall, Merthyr, on Saturday. Mr. R. BEDLINGTON, in the absence of the President, took the chair.

After the election of officers for the ensuing year, and the admission of fresh members, the discussion on Berard's coal washing-machine, adjourned from last meeting, was resumed.

Mr. MENELAUS spoke at length, describing the coal washing-machines he had seen and examined in Prussia and France. They were infinitely superior to any machine he have ever seen in this country, and, to say the least of them, the countries named were 20 years ahead of us in their coal washing-machines. He thought the invention of Berard's superior to the one in use at Dowlais in many ways.

Mr. B. KIRKHOUSE asked if the machines in Prussia could utilise soft or rotten coal, which was now valueless?

Mr. H. KIRKHOUSE enquired if the Prussian machines would benefit the owners of the Rhondda coal veins by washing, inasmuch as the Rhondda coal was considered now to produce as much small coal and dust as the ordinary Merthyr veins?

Mr. HUXHAM said he found one defect with Berard's machine. This was that every time the slush-box was filled with dust and pyrites the machine must be stopped, to allow time to clear the same, such stoppages causing a loss of time and labour.

Mr. MENELAUS said that any coal in the shape of dust and rottenness, and which did not require the use of the rolling or crushing part of the machine, was useless, and could not be utilised by the machine either in Prussia or this country. He thought it would not be as serviceable to the Rhondda as it would be to the Merthyr veins.

The PRESIDENT commented on the importance of saving small coal generally, and to the advancement that was acquired in the direction of coal-washing machines.

The discussion on Mr. Thomas Joseph's paper, "On the Changing Character of the Coal from Bituminous to Anthracite between Tredegar Ironworks and the Venallt in Glynn Neath," was postponed until the next meeting. It will be remembered that this subject was slightly discussed at the last meeting of the Iron and Steel Institute, which was held at Merthyr Tydvil. The author treats—First, of the changes from east to west, and the gradation of change upward from the lowest to the uppermost seams; second, the gradual return of the coal to bituminous southward along the fault line; third, an examination of the faults and dislocations; and, fourth, the geological period when the changes took place. It is stated that east of Tredegar and the Rhymney Valley a change in quality, which becomes more marked at Dowlais, commences; the bituminous character of the coal gradually disappears westward by Penydarren, Plymouth, and Cyfarthfa, until, on reaching the Aberdare Valley, the coke made from coal west of the great fault is remarkably small. It is almost unnecessary to say that the mines of the Aberdare Valley are justly celebrated for producing steam coal of a very superior kind.

At Hirwain the coal becomes mere anthracite, and in some places the change is very rapid. The portion of the outcrop from Tredegar through Rhymney to the Dowlais fault is very free from large faults, and the alteration in the condition of the coals between these two points seem to be gradual and slow. West of Dowlais the change is at once evident, and much more so when crossing the Penydarren fault in the collieries of the Plymouth Iron Company. There is a marked difference, again, west of the Merthyr Valley fault, which fault is clearly traceable in the River Taff, opposite the Cyfarthfa Mills, past the Plymouth, Pentrebach, and Dyfryn Ironworks, which are built upon the line of it. The next definite change is at the large West Llwydcoed fault, where the alteration in the three lower coals becomes very marked. Again, there is a further change at the outcrop of the Gadlys fault, on the Hirwain Common; but the most decided and distinct alteration takes place at the Hirwain No. 1 large fault. The seams also lose their bitumen in succession upwards as we follow their northern outcrop. In the Merthyr and Aberdare Valleys there is reason to believe that the coals return to their bituminous nature in the synclinal hollow, near Aberdare junction, where the descending plane from the north outcrop ceases, and the stratification has been bent upwards to a south and south-westerly rise. The change back to the bituminous from the Merthyr Valley from the top margin of yellow flame coals is about ten miles, in the Aberdare Valley about eleven miles, in the Rhondda Valley about nine miles, but on the east side of the Venallt, in the Corrwg and Afan Valleys, it cannot be more than about six miles. It is assumed that in going southward from the northern outcrop, wherever the stratification flattens from the descending plane and bends upwards, taking a southerly rise, the coals become more bituminous, and continue so. The author concludes that the occurrence of the faults was long anterior to the change in the coal from bituminous to anthracite, and that the alteration was produced by continued magnetic action, probably extending over a considerable period of time, and resulting in the decomposition of the bituminous matter of the coal into carburetted hydrogen. He also maintains that the measure of the progress of the change is marked by the amount or "slip cleavage" in the coal seams.

A paper was next read by Mr. Burns "On Small Trams." The author of this paper introduced a mass of statistics and figures into his paper, which made it difficult to follow to its conclusions. In proof of the advantage to be derived from the use of small steel trams in the 6-ft. coal veins, in lieu of the ordinary large trams, the sum gained in the pecuniary sense amounted 5d. per ton, which was principally obtained by being able to employ boys and cheaper labour in driving ponies instead of horses in the haulage of the coal from the face to the bottom of the shaft.

On being interrogated by several of the members, as to whether the same advantages may not be possessed by the use of the trams in the under veins of coal, he appeared unprepared to give a satisfactory reply.

Mr. WILKINSON, in answer to Mr. Menelaus, said that his experience of small trams was quite the opposite. The colliers in his pits would gladly get rid of them, and would prefer the ordinary large tram by at least 1d. per ton. Such was his opinion, as given at the last meeting, and he had had no reason to alter his views on the subject.

Mr. MENELAUS thought it incontrovertible that the larger the wheel of the load, whether on the surface or below it, it mattered not where, the cheaper would be the haulage. That fact was patent to all mechanical engineers. That being so, it followed that the small tram, having a smaller wheel, would not have the tendency to reduce haulage charges. He, therefore, supported the view of Mr. Wilkinson.

A paper was next read by Mr. DYNE STEEL, "On Steam Machinery employed in Grinding Silver Ore at the Mines of Cerro de Pasco, Peru."

The discussion on the papers, "The Cleveland Ironstone," "The Blast-furnace at the Cleveland Ironworks," and "The Neath Mineral District," were postponed until the next meeting.

—*Iron and Coal Trades Review.*

AWARDED TWENTY GOLD AND SILVER FIRST-CLASS PRIZE MEDALS.

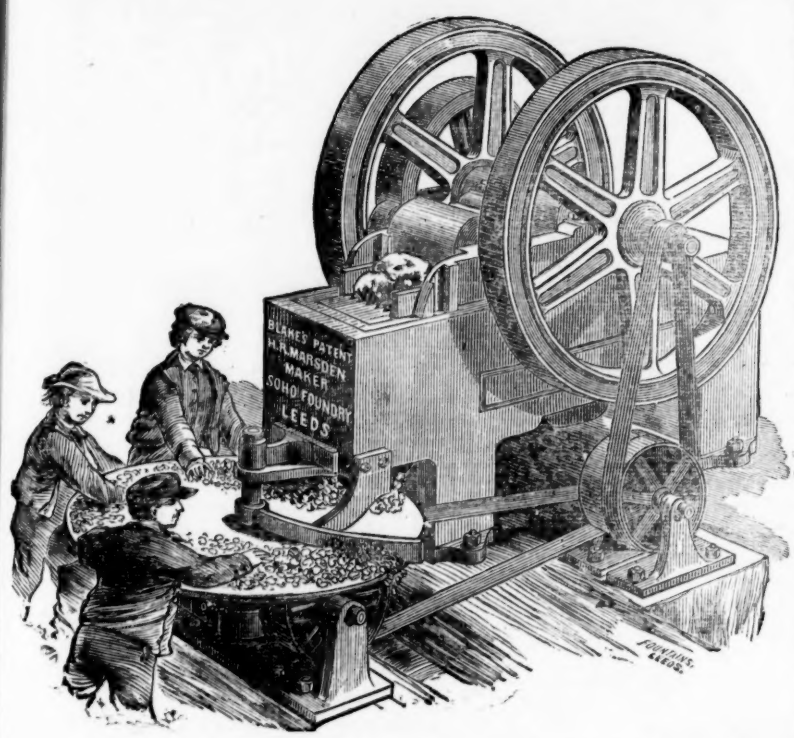
IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,
OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke 1½ ton of the hardest trap or winstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS. It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company,
H. R. Marsden, Esq. JAMES WILLIAMS.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the manganese jaws about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
THOS. GOLDSWORTHY & SONS.
H. R. Marsden, Esq.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.
WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly,—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.
Messrs. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.
WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS

Your stone breaker gives us great satisfaction. We have broken 101 tons of Spanish pyrites with it in seven hours. EDWARD AARON,
H. R. Marsden, Esq. Weston, near Runco ru

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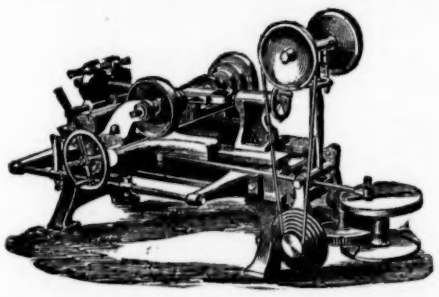
MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

Patent Duplex Cotter-Hole and Key-Bed DRILLING MACHINE.

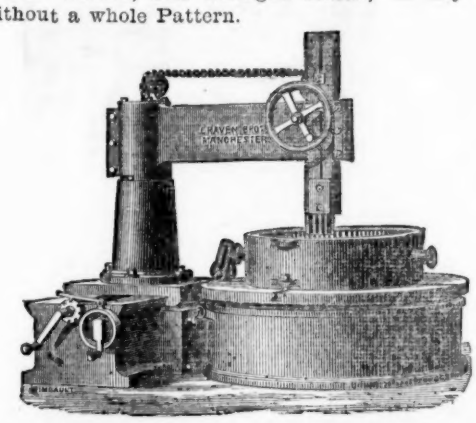


The advantage of this Machine is, that the Drills are only requisite to be half the length of the Cotter-hole required to be cut, as they operate simultaneously from both sides of the object, meeting accurately in the middle, and doing the work in less than half the usual time, besides producing a smooth hole on account of short, stiff Drills being used, thus producing a much better class of work, hitherto unattainable by the Machines with one long Drill.

The Machine is made in three sizes, and often made with double set of Head Stocks, to drill both ends of a connecting rod at the same time.

Improved WHEEL-MOULDING MACHINE.

This Machine will Mould the Teeth of Bevel, Spur, and Worm Wheels, also Straight Racks, of any Pitch without a whole Pattern.



Some of the many advantages in the use of this Machine are, that the Teeth of Wheels are perfectly straight across the Tooth, no taper being required to draw the pattern; the Wheels are true in diameter, not depending upon a wood model, which sometimes alters in shape; Wheels of any pitch and form of teeth can be moulded without the use of a whole expensive pattern; and wheels to work into each other can be made mathematically correct in form, at the small cost of segment patterns.

The Machine is made in various sizes to mould wheels of any diameter.

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MAKERS OF EVERY DESCRIPTION OF MACHINE TOOLS,
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A LIBERAL COMMISSION
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THE PATENT DON LUBRICATING OIL
TO THEIR FRIENDS AND CUSTOMERS.

It is quite as good and durable a lubricant as the best, and is little more than half the price of the common kinds. While there is no more serviceable or economical Oil for Engines and Machinery, it is the best known lubricant of the axles of Railway Trucks and Carriages, and it may be applied in the ordinary grease boxes, at a saving of one-half over grease. Particulars forwarded on application.

EXTRACTS FROM LETTERS RECEIVED:—

From JAMES NASMYTH, Esq., the Inventor of the Steam-Hammer.
"I am highly pleased with it as a most effective and durable lubricator."

From the Engineer, BRIDGEWATER TRUSTEES, Walkden.
"I find its lubricating qualities effective and durable."

From DUBS AND CO., Glasgow Locomotive Works.
"We find it a good lubricating oil, and very cheap."

From JOHN HARTOP, Esq., Manager for Earl Fitzwilliam, Elsecar.
"The oil answers my purpose well."

From Messrs. RICHARD EVANS AND CO., Haydock Collieries.
"It answers quite as well as yellow grease (for railway wagons), and at a saving of forty-eight per cent."

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"I find a saving upon four locomotives of £60 per annum."

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"It kept the (fan) shaft perfectly cool, and with a less quantity."

From T. and W. CLARKE, Havelock Works, Leicester.
"Having fully tested its merits, I find it equal to the best lubricating oil have ever used."

From Messrs. HENRY BALFOUR AND CO., Leven, Fife.
"We are glad to say that it suits us admirably, and it gives us better results, at less expense, than other oils."

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S. OWENS AND CO.
Hydraulic and General Engineers,
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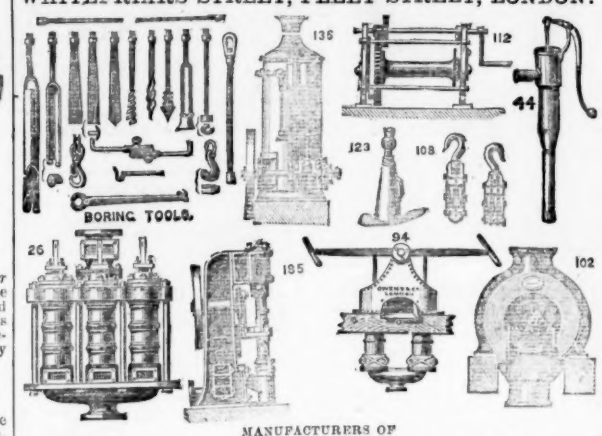

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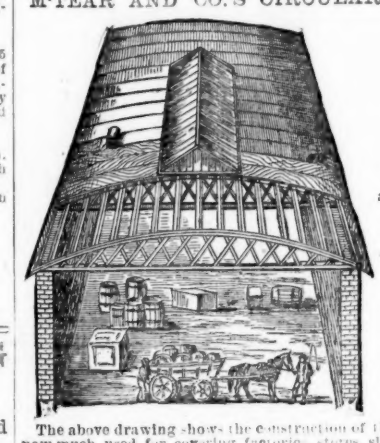

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GREAT ECONOMY
AND
CLEAR WIDE SPACE.

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OR,
CORPORATION STREET
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The above drawing shows the construction of this cheap and handsome roof, now much used for covering factories, stores, sheds, farm buildings, &c., the principals of which are double bow and string girders of best pine timber, sheeted with ½ in. boards, supported on the girders by purlins running longitudinally, the whole being covered with patent waterproof roofing felt. These roofs so combine lightness with strength that they can be constructed up to 100 ft. span without centre supports, thus not only affording a clear wide space, but effecting a great saving both in the cost of roof and uprights.
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Wholesale buyers and exporters allowed liberal discounts.
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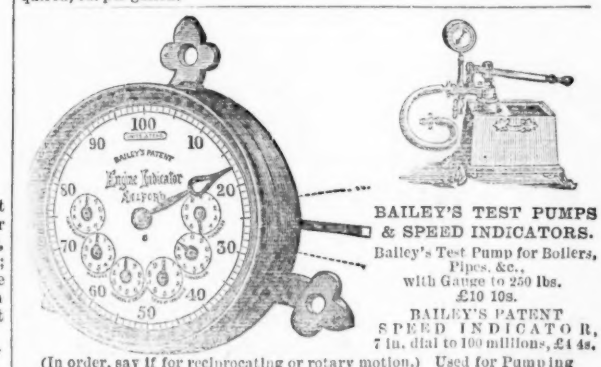

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BAILEY'S PATENT SPEED INDICATOR, 7 in. dial to 100 millions, £4 4s.
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Shares.	Company.	Paid.	Price.		
£100	John Abbot and Co. [L.]	£ 75 0 0	20	15	dis.
50	Blaenavon Iron and Steel Co. [L.]	7 10 0		—	
100	Bolckow, Vaughan, and Co. [L.]	30 0 0	33	34	pm.
100	Brown, John, and Co. [L.]	70 0 0	2 dis.	par.	
10	Consett Iron Co. [L.]	7 10 0	4	4½	pm.
100	Cammell and Co. [L.]	80 0 0	17	15	dis.
32	Ebbw Vale Co. [L.]	27 10 0	9	8½	dis.
20	General Mining Association [L.]	20 0 0	4	7	
15	Hopkins, Gilkes, and Co. [L.]	10 0 0	⅝	⅜	dis.
10	Ironmasters' Company [L.]	10 0 0		—	
10	Midland Iron Co. [L.]	5 0 0	22	22½	pm.
2¼	Mersey Steel and Iron Co. [L.]	11 10 0	8⅛	7⅞	dis.
4	Mwyndy Iron Ore Co. [L.]	3 10 0	2½	2	dis.
1	Nerbudda Coal and Iron	0 7 0	par.		
35	Palmer's Shipbuilding and Iron Co. [L.]	25 0 0	1¼	¾	dis.
35	Ditto ditto	35 0 0	1¼	¾	dis.
100	Parkgate Iron Co. [L.]	65 0 0	6	4	dis.
20	Patent Shaft and Axletree Co. [L.]	10 0 0	5¼	—	pm.
50	Rhymney Iron Co. [L.]	50 0 0	21	19	dis.
15	Ditto New	15 0 0	6½	5⅛	dis.
50	Shotts Iron Co.	50 0 0	21	19	dis.
100	Sheepbridge Iron and Coal Co. [L.]	55 0 0	17	16	dis.
100	Staveley Iron and Coal Co.	60 0 0	40	42½	pm.
100	Ditto ditto New	10 0 0	8	9	pm.
100	Thames Iron Company	100 0 0		—	
7¼	Titanic Iron and Steel	5 0 0		—	
100	Vancouver Coal [L.]	6 0 0	par.	1	pm.
10	Van Iron Ore [L.]	10 0 0		—	
100	Wigan Coal and Iron Co	100 0 0	10	8	dis.
75	Ditto ditto	75 0 0	10	8	dis.

THE MINING SHARE LIST

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		10 6 8	0 5 0	Jan. 1869
6000	Boscaswell, t, c, St. Just	1 0 0	—		0 2 0	0 2 0	Apr. 1870
200	Botallack, t, c, St. Just	91 5 0	225	215 220	585 5 0	5 0 0	Nov. 1870
20000	Bronfloyd, l, Cardigan*	2 10 0	2¼	2¼ 2¾	2 10 0	0 1 0	Oct. 1870
4000	Brookwood, c, Buckfastleigh	1 16 0	—		0 15 0	0 2 6	Nov. 1870
5094	Bwlch Consols, s-l, Cardigan*	4 0 0	2¼	2 2⅛	0 9 0	0 2 0	May 1870
6400	Cashwell, l, Cumberland*	2 10 0	—		0 12 6	0 3 6	Sept. 1870
916	Cargoll, s-l, Newlyn	16 5 7	1¼	1 1¼	16 15 0	0 10 0	Aug. 1869
1280	Chanticleer, l, Flint	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, c, Illogan‡	19 14 9	18	18 19	4 13 0	0 10 0	Oct. 1870
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		32 8 0	0 5 0	Oct. 1870
128	Cwmystwith, l, Cardiganshire	60 0 0	—		387 10 0	2 0 0	July 1869
280	Derwent Mines, s-l, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	100	95 100	1149 0 0	4 0 0	Nov. 1870
656	Ding Dong, t, Gulval‡	49 14 6	16	14 16	7 10 0	0 15 0	Aug. 1870
1432	Dolcoath, c, t, Camborne	32 4 6	130	125 130	251 2 6	3 0 0	Dec. 1870
12800	Drake Walls, t, Calstock†	2 10 0	1⅛	1⅛ 1¼	1 3 3	0 1 0	July 1870
6144	East Caradon, c, St. Cleer†	2 14 6	6	5½ 6½	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		188 10 0	2 0 0	Sept. 1870
6400	East Pool, t, c, Pool, Illogan	0 9 9	10¼	10¼ 11	10 17 3	0 5 0	Nov. 1870
1906	East Wheal Lovell, t, Wendron	3 9 0	25¾	32½ 35	14 16 0	2 0 0	Nov. 1870
2800	Foxdale, l, Isle of Man*	25 0 0	—		76 15 0	1 0 0	Oct. 1870
5000	Frank Mills, l, Christow	3 18 6	1½	1¼ 1½	4 8 0	0 2 6	Aug. 1870
3950	Gawton, c, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	18	17½ 18	13 1 0	0 8 0	Sept. 1870
3000	Great Northern Manganese*	5 0 0	—		—	5 p.ct.	Feb. 1869
5908	Great Wheal Vor, t, c, Helston†	40 0 0	3⅛	3 3¼	15 12 0	0 3 6	June 1870
10240	Gunnislake (Clitters'), t, c	4 19 0	—		0 2 0	0 1 0	Nov. 1870
1024	Herodsfoot, l, near Liskeard†	8 10 0	44	41 44	54 0 0	1 10 0	Oct. 1870
2000	Holmbush and Kelly Bray, c*	1 0 0	—		0 3 0	0 1 0	Nov. 1869
10000	Killaloe, sl, Tipperary	1 0 0	¾		0 2 2	0 0 7	June 1870
165	Levant, c, t, St. Just	10 8 1	—		1101 0 0	2 0 0	Aug. 1869
400	Lisburne, l, Cardiganshire	18 15 0	—		529 0 0	2 0 0	Jan. 1870
3000	Maes-y-Safn, l, Flint*	20 0 0	—		4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c, Caradon	4 10 6	6¾	6¼ 7	6 10 0	0 4 0	Oct. 1870
1800	Minera Mining Co., l, Wrexham*	25 0 0	—		282 3 3	4 0 0	Nov. 1870
20000	Mining Co. of Ireland, c, l, c‡	7 0 0	—	7¼ 7⅜	0 4 6½	0 2 1	July 1870
6400	New Pembroke, t, c, Par Station	5 0 0	5		0 5 0	0 2 6	Nov. 1870
2000	North Levant, t, c, St. Just	10 12 0	11¼	11¼ 12	1 15 0	0 10 0	Aug. 1870
5610	North Wheal Crofty, c, Illogan†	3 11 3	1¾	1⅜ 1¾	0 4 0	0 1 6	Oct. 1870
256	Pendarves United, t, c, Camb.	86 0 0	60	50 60	15 0 0	5 0 0	Nov. 1870
5000	Penhalls, t, St. Agnes	3 0 0	—		1 13 6	0 4 0	Oct. 1870
500	Phœnix, t, c, Linkinhorne	50 0 0	—		456 10 0	7 0 0	May 1870
2000	Poldice, t, c, Gwennap	10 0 0	—		1 10 0	0 10 0	Oct. 1870
12800	Prince of Wales, c, Calstock	0 12 6	1	1⅛ 1⅜	0 10 6	0 1 0	Nov. 1869
1120	Providence, t, Uny Lelant†	10 6 7	39	38 40	99 12 6	1 0 0	Sept. 1870
15000	Queen, s, c, Calstock*	0 10 0	—		0 1 0	0 1 0	Sept. 1870
5869	Rosewall Hill & Ransom, t	4 0 0	1¼	1⅛ 1¼	0 13 0	0 1 6	Dec. 1870
512	South Caradon, c, St. Cleer†	1 5 0	250	230 250	655 10 0	4 0 0	Nov. 1870
6000	South Darren, l, Cardigan*	3 6 6	—		1 1 6	0 1 6	Nov. 1870
937	South Wh. Crofty, c, Illogan	24 10 10	7	6 7	3 0 0	0 10 0	June 1870
496	So. Wh. Frances, c, Illog.†	18 18 9	30	29 31	374 13 6	1 0 0	Mar. 1868
242	Spearn Moor, t, St. Just	36 17 9	19	17 19	14 15 0	1 0 0	Oct. 1870
940	St. Ives Consols, t, St. Ives	10 15 0	—		0 10 0	0 10 0	May 1869
8771	St. Just Amalgamated, t*	3 10 0	—		0 5 0	0 2 6	Nov. 1870
508	Summer Hill, l, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
12000	Tankerville, l, Salop*	6 0 0	13½	13½ 14	0 10 0	0 5 0	Oct. 1870
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	45	44 46	27 8 6	1 10 0	Nov. 1870
2000	Trumpet Cons., t, Helston	11 10 0	22	21 22	11 12 0	0 15 0	Aug. 1870
12000	Van, l, Llanidloes*	4 5 0	55	53 55	2 15 0	0 15 0	Sept. 1870
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	52	51 52	47 7 6	2 0 0	Nov. 1870
512	West Wheal Frances, t, Illogan	106 15 0	34	31 33	4 10 0	1 10 0	Oct. 1869
400	W. Wheal Seton, c, Camborne†	47 0 0	120	110 120	669 0 0	2 10 0	Dec. 1870
512	Wheal Basset, c, Illogan†	5 2 6	70	65 75	632 10 0	1 0 0	June 1868
512	Wheal Jane, s-l, Kea	10 15 0	57	55 57	33 10 0	1 10 0	Nov. 1870
4295	Wheal Kitty, t, St. Agnes	5 4 6	8¼	8 8½	5 13 0	0 7 0	Nov. 1870
1024	Wheal Kitty, t, Uny Lelant†	3 10 6	11	10½ 11	12 12 6	0 10 0	July 1870
896	Wheal Margaret, t, Uny Lelant	13 17 6	9		78 15 0	0 10 0	Nov. 1870
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	9	8 9	71 17 6	0 10 0	Dec. 1870
1000	Wh. Mary Hutchins, Plymp., t	2 12 6	—		0 10 0	0 5 0	Aug. 1869
80	Wheal Owles, t, St. Just‡	70 0 0	—		474 13 0	10 0 0	Nov. 1870
396	Wheal Seton, t, c, Camborne	60 0 0	25	24 26	254 15 0	2 0 0	Feb. 1869
17000	Wicklow, c, s, Wicklow	2 10 0	8	7⅞ 8	50 2 6	0 2 6	Sept. 1870

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	2¼	1¾ 2¼	0 13 0	0 2 6	Oct. 1870
130000	Almada&TiritoConsolidated,s*†	1 0 0	1	⅞ 1⅛	0 1 6	0 1 6	Oct. 1870
20000	Australian, c, South Australia†	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	14	13½ 14¼	5 17 6	0 10 0	May 1870
30000	Central American Association*†	0 15 0	—		0 6 0	0 1 0	July 1869
21000	Colorado Terrible s-l, Colorado*†	5 0 0	4¼	4¼ 4¾	0 2 6	0 2 6	Nov. 1870
10000	Copiapo Mining Co., Chili†‡	16 10 0	3	2 3	0 4 0	0 4 0	April 1869
76162	Don Pedro North del Rey*†	0 14 0	3	2⅝ 2¾	2 3 9	0 4 0	Mar. 1870
70000	English and Australian, c‡	2 10 0	—		—	0 0 9	Feb. 1869
25000	Fortuna, l, Spain*†	2 0 0	2⅛	2¼ 2¾	2 2 10	0 2 0	Oct. 1870
10000	Gonnesa, l, Sardinia*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austral†.	1 0 0	⅜	¼ ⅜	0 1 10	0 0 6	Nov. 1868
15000	Linares, l, Spain*†	3 0 0	3¾	3½ 3¾	12 13 4	0 5 0	Oct. 1870
50000	Panulcillo, c, Chili*†	4 0 0	2½	2 2½	10 per cent.		Yearly.
10000	Pontgibaud, s-l, France†	20 0 0	17	16 17	7 1 8	1 15 6	Nov. 1869
100000	Port Phillip, g, Clunes*†	1 0 0	1⅛	1⅛ 1⅜	1 6 0	0 1 6	Jan. 1870
12000	Scottish Australian Min. Co.†	1 0 0	—		6 per cent.		Apr. 1870
11000	St. John del Rey, Brazil*†	15 0 0	25	23 24	81 10 0	4 5 0	Dec. 1867
15000	Sweetland Creek, g, California*†	4 0 0	3½	3¼ 4	0 8 0	0 4 0	Nov. 1870
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, g, s, Argentine Republic*†	1 0 0	¾	½ ¾	Fully pd.
20000	Anglo-Australian, g, Victoria* (£2 10s. shares)	1 5 0	—		Nov. 1870
100000	Anglo-Brazilian, g*†	0 12 0	—		Nov. 1869
12500	Anglo-Italian, g*†	1 7 6	—		Jan. 1868
20000	Arivaca, g, s, Arizona* (£10 shares)	2 10 0	—		Oct. 1870
20000	Australian United, g, Victoria*†	2 10 0	¾	¼ ¾	Fully pd.
30000	Bellavista, s, Peru* (£1 shares)	0 15 0	—		Oct. 1870
50000	Braganza, g, Brazil*	0 15 0	—		Oct. 1870
20000	Capula, s, Mexico*†	2 0 0	1	½ 1	Fully pd.
30000	Chontales, g, s, Nicaragua*†	5 0 0	¾	½ ¾	Mar. 1868
100000	Cuiaba, g, Minas Geraes, Brazil	0 10 0	—		June 1870
20000	Eberhardt and Aurora, s, Nevada*†	10 0 0	12	14 15	Fully pd.
100000	Eclipse, g, California* (£1 shares)	0 16 0	¾	¾ ⅞	Nov. 1870
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 18 0	½	¼ ½	Nov. 1869
150000	General Brazilian, g (£1 shares)	0 17 6	¾	⅞ 1⅛	Oct. 1870
25000	Guerrero, g, Mexico (total cap.=50,000 shares of £1)	0 10 0	—		Aug. 1869
100000	Imperial Ottoman, s-l, Turkey*	1 0 0	—		Fully pd.
50000	Javali, g, Nicaragua	2 0 0	—		Jan. 1869
7927	Lusitanian (Portugal)†‡ (£5 shares)	3 0 0	¾	¼ ¾	Dec. 1866
51000	New Quebrada, c, Venezuela*†	5 0 0	—		Fully pd.
50000	New Rosario, s, Mexico	1 0 0	—		Fully pd.
15000	Pacific, g, s, Nevada and California* (and reduced)	7 0 0	1¼	1¾ 2	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	⅜	⅜ ⅝	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 15 0	½	⅜ ⅝	Sept. 1870
50000	Sao Vicente, Brazil*†	0 6 0	—		Oct. 1868
112500	Sierra Battes, g, California*	2 0 0	—		Fully pd.
60000	South Aurora, s, White Pine, Nevada*	5 0 0	—		Fully pd.
100000	Taquaril, g, Brazil* (£1 shares)	0 13 0	2½	2⅜ 2½	Sept. 1870
40000	Tuolumne, g, California*	2 0 0	2⅛		Fully pd.
43174	United Mexican, s, Mexico†‡*	28 5 2	3	2 3	May 1868
30000	Val Antigoria, g, Italy*	1 12 6	—		Dec. 1869
80000	Worthing, c, South Australia*†	1 0 0	—		Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	¼	⅛ ¼	Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	⅞	⅝ ⅞	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Assheton, l*, Carnarvonshire	5 0 0	4½	4 5	Fully pd.
12000	Cae Gynon, l, Cardiganshire*†	2 0 0	1	½ 1½	Fully pd.
1000	Carn Brea, c, t, Illogan‡	30 0 0	18	16 18	June 1868
3000	Chiverton, l, Perranzabuloe	11 5 0	1¼	1 1¼	Oct. 1870
3000	Chiverton Moor, l, Perranzabuloe	7 11 0	2¾	2¼ 2¾	Feb. 1869
3000	Chiverton Valley, l, Perranzabuloe	3 10 6	3	2⅛ 3	Nov. 1870
32700	Conroy, l, Montgomeryshire*	3 0 0	—		Oct. 1870
512	East Basset, c, Redruth†‡	40 0 0	3	2 3	Mar. 1870
6000	East Grenville, c, Camborne	4 13 0	2¼	2 2¼	Aug. 1870
1200	Fedw, l, Llanidloes*	10 0 0	—		Fully pd.
3000	Florida, s-l, Cardiganshire*	3 0 0	3		Fully pd.
5000	Gorsedd and Celyn Level, l, Flintshire	2 0 0	3¼	3 3¼	Fully pd.
6000	Hingston Down, c, Calstock†	6 4 0	¾	⅜ ⅝	Aug. 1870
400	New Wheal Seton, c, Camborne	70 0 0	—		Dec. 1869
695	North Roskear, c, Camborne	62 19 0	—		Aug. 1869
5936	North Treskerby, c, St. Agnes	1 16 4	—		Aug. 1869
15000	Penrhyn, l, Carnarvonshire*	2 0 0	1⅞	1⅝ 1⅞	Fully pd.
12000	Plynlimmon, l, Llanidloes*	2 5 0	2¼	2⅛ 2⅜	Sept. 1870
1024	Rose and Chiverton United, l, Newlyn	8 0 0	10	10 10½	May 1870
6123	South Condurrow, t, c, Camborne	5 5 6	3⅛	3 3¼	Oct. 1869
10000	Tan-yr-Allt, l*, Carnarvonshire	3 0 0	1¾	1¼ 1¾	Fully pd.
2000	Van Consols, Llanidloes, l*	2 10 0	1¾	1⅝ 1⅞	Fully pd.
6000	West Basset, c, Illogan†‡	2 18 0	—		Sept. 1870
2288	West Caradon, c, St. Cleer‡‡	2 17 0	⅞	¾ ⅞	Nov. 1870
12000	West Maria and Fortescue, c, Lamerton	3 13 0	1⅜	1⅜ 1½	July 1870
12000	West Pant-y-Go, s-l, Flint*	1 0 0	—		June 1870
12000	West Tankerville, l, Salop	3 0 0	3½	3¾ 4	July 1870
6000	Wheal Agar, c, Illogan	8 8 6	—		Oct. 1870
512	Wheal Buller, c, Redruth†‡	28 5 0	2½	2 2¼	Dec. 1870
5386	Wheal Crebor, c, Tavistock	2 15 6	½	⅜ ½	Sept. 1870
5724	Wheal Grenville, c, Camborne†	10 11 0	2⅝	2⅝ 2⅞	Dec. 1869
4096	Wheal Uny, t, c, Redruth	10 14 6	2¾	2⅝ 2⅝	Oct. 1869

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.
12800	Aberdaunant, l, Llanidloes*	5 0 0	—	
4000	Bedford Consols, c, Tavistock	3 2 6	3	2⅝ 3⅛
4000	Bedford United, c, Tavist.*	4 1 2	1	1 1¼
20000	Blaen Caelan,* s-l, Cardig.	1 0 0	—	
5000	Blue Hills, t, c, St. Agnes	1 8 0	—	
25000	Brynambor, l, Cardigan	0 10 0	2¼	2 2¼
20000	Brynpostig, Montgomery, l*	1 0 0	—	
7500	Brynystwith, l, Cardigan*	2 0 0	—	
6000	Budnick Consols, t, Perranz.	0 15 0	—	
6000	Bwadrain Cons., s-l, Cardig.	3 5 0	1⅛	
30000	Caldbeck Fells, l, Cumberld.*	1 17 6	—	
2000	Cape Cornwall, c, St. Just	0 14 0	—	⅞ 1
5000	Capel Bauhaglog, l, Mont.*	3 0 0	—	
7000	Cappagh, c, Ireland*	1 10 0	—	
910	Caradon Consols, c, St. Cleer	33 16 0	—	
6400	Cardigan Bay, s-l, Aberyst.	5 0 0	10	10
6000	Carn Camborne, c, Cambrn.	3 2 6	—	
3000	Cefn Brwyno (lim. to £5)	3 0 0	—	
6000	Cefn Consols, l, Flintshire*	5 0 0	5	5 5¼
256	Condurrow, c, t, Camborne‡	76 10 0	—	
1055	Craddock Moor, c, St. Cleer‡	15 8 0	—	
50000	Crenver & Wheal Abraham*	2 0 0	—	
4000	Cwm Ricket, l, Montgom.	2 15 0	—	
4000	Devon & Cornwall United	6 6 0	—	
5000	Dolwen, l, Cardiganshire	0 10 0	1⅛	1 1⅛
30000	Dyliffe Consols, s-l, Mont.	1 0 0	—	
2586	East Bottle Hill, Plymp., t, c	1 6 6	—	
6000	East Carn Brea, c, Redruth‡	6 3 6	—	
4000	East Chiverton, l, Perranz.	3 18 0	—	
4000	E. Gunnislake & S. Bed. c.	12 0 0	—	
2048	East Harptree, l, Mendips*	1 10 0	—	
10000	East Parys U., l, c, Anglesea	2 0 0	—	
350	East Plynlimmon, l, Llanid.*	18 10 0	—	
3640	East Providence, t, Lelant	7 6 9	—	
5610	East Seton, c, Camborne	1 12 6	—	
6000	East Wh. Reeth, Uny Lelant	1 8 8	—	
12800	Excelsior, l, c, Stoke Climsld.	0 3 6	⅜	¼ ⅜
5000	Exmouth, s-l, Christow	0 7 6	1⅞	1½ 2
12800	Florence and Tonkin United	0 3 6	—	
6000	Gen. Min. Co. for Ireland	7 0 0	—	
12500	Gilfach, s-l, Llangardock*	2 0 0	—	⅝ ¾
40000	Glasgow Caradon, c* [30,000 £1 p., 10,000 15s. p.]			
5700	Goginan, Cardigan, l	12 10 0	—	
6144	Gonamena, c, St. Cleer	8 4 9	—	
5000	Gorn, l, Llanidloes	0 17 6	—	
4096	Great Caradon, c, St. Ive	5 0 0	—	
12500	Gt. N. Laxey (Isle of Man)*	1 0 0	—	
3035	Gt. Retallack, s-l, b, Perran.	3 8 0	1	⅞ 1
3000	Great Rock, l, Corwen*	4 5 0	—	
4096	Great Royalton, t, Roche	0 18 0	—	
6000	Gt. S. Chiverton, s-l, Perranz	2 15 0	—	
5143	Great S. Tolgus, c, Redruth	2 8 6	¼	⅛ ¼
12000	Great West Chiverton, s-l	2 10 0	—	
6000	Great Western, t, c, Breage	2 0 0	—	
1798	Gt. Wh. Fortune, t, Breage	31 7 4	—	
4096	Gt. Wh. Lovell, t, Wendron.	1 0 0	1¾	1½ 2
12000	Gwydyr Park, l, Llanrwst*	1 6 0	—	
6000	Hammett, t, St. Neots	1 4 0	—	
6000	Harewood Consols	0 7 0	⅛	⅜ ⅛
1000	Hemerdon U., t, Plympton	1 0 0	—	
6000	Hobb's Hill, t, St. Neot	0 1 8	—	
6400	Holyfield, l, Cumberland*	1 0 0	—	
962	Leeds and St. Aubyn, t, c	23 4 2	—	
5000	Llanarmon, Denbigh	2 0 0	—	
20000	Llywernog, l, Cardiganshire	1 0 0	—	
5120	Lovell, t, Wendron	0 3 0	—	
5120	Lovell Consols, Wendron, t.	0 10 6	—	
4662	Minera Union, l [2500 £4 p., 2162 £2 15s. p.]			
3000	Mineral Bottom, s-l, Perranz	5 10 0	⅞	¾ ⅞
6000	Mold, s-l, Flintshire*	5 0 0	—	
6144	Nangiles, t, c, Kea	7 6 0	1	
12000	Nanteos Consols, l, Cardigan*	1 0 0	—	
4000	Nanty, l, Montgomeryshire*	1 0 0	—	
10000	New Beldon, l, Northumb.*	0 10 0	⅝	¾ ⅞
6000	New Brynpostig, l, Llanid.	2 0 0	—	
12000	New Central Snailbeach	1 0 0	—	
6000	New Clifford, c, Gwennap*	3 15 0	—	
6250	N. Crow Hill, l, St. Stephen.	3 17 0	⅝	½ ⅝
25000	New Great Consols, t, c	1 0 0	—	
12000	New Trelawny, s, l, St. Ives.	5 5 0	—	
14000	New Victoria, c, Ashburton*	1 0 0	—	
3000	N. Wh. Charlotte, t, c, St. Agnes	1 0 0	—	
4000	New Wh. Grylls, l, Perranz.	0 10 0	—	
4096	New Wh. Lovell, t, Wendron	3 4 6	1½	1⅛ 1¾
2000	N. Wh. Towan, t, c, Illogan	1 19 6	—	
6000	North Cornwall Kaolin*	0 7 6	—	
5000	No. Dolcoath, c, Camborne	4 3 0	—	
3457	North Downs, c, Redruth	5 17 10	—	
6000	North Jane, t, s-l, Kenwyn	5 1 0	—	
1000	North Lovell, t, Wendron	5 0 0	—	
5000	North Pool, c, Illogan	4 10 0	—	
12000	North Tankerville, l, Salop	1 0 0	—	
3000	N. Wh. Chiverton, l, Perran.	5 0 0	—	
12000	Ohio Crown, l, Isle of Man*	0 12 0	—	
12288	Okel Tor, c, Calstock	2 12 10	⅞	¾ 1
8000	Old Gunnislake, c, Calstock	3 9 6	—	
20000	Old Treburgett, s-l, Cornwall	1 0 0	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
12000	Parys Mountain, c, Anglesea	3 0 0	2¾	3 3¼
5694	Pedn-an-drea, t, Redruth	8 2 0	—	
20000	Pen'Allt, l, Carnarvonshire	2 0 0	1⅛	1⅛ 1⅜
5000	Pendeen Consols, c, St. Just	8 4 0	—	
4600	Penhale United, s-l, Perranz.	5 0 0	—	
1857	Penhale Wh. Vor, t, c, Helston	10 0 0	—	
12000	Perkins Beach, l, Salop	1 0 0	—	
6000	Perran Consols, t, Perran	2 0 6	1	¾ 1
3000	Perran Wheal Virgin	0 17 6	1⅝	1⅜ 1¾
1772	Polberro, t, St. Agnes	15 0 0	—	
2000	Polbreen, t, St. Agnes	3 15 0	7¼	6¾ 7¼
2000	Powell United, s-l, Cardig.*	5 0 0	—	
6000	Prince Royal, t, St. Agnes	1 5 0	—	
12800	Princess of Wales, c, t	0 11 0	—	
3877	Redmoor, c, t, Callington	2 5 0	—	
5000	Reperry Mine, t, c, Lanivet*	1 10 0	2⅛	2 2⅛
12000	Rhydtalog, s-l, Cardiganshire	1 0 0	—	
6000	Roaring Water, c, Ireland	3 0 0	—	
3000	Roche Consols, Roche	0 11 6	⅞	¾ ⅞
10000	Royalton, t, St. Columb	1 8 0	—	
512	South Basset, c, Gwennap	30 10 0	—	
1000	South Bwadrain, l, Cardig.	1 0 0	—	
8000	South Cardigan, l, Cardigan.	5 0 0	6	5⅛ 6
5000	South Carn Brea, c, t	1 6 6	⅞	½ ⅝
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
6000	South Grenville, c, Camb.	0 2 0	—	
3395	So. Herodsfoot, l, Liskeard.	5 0 0	—	
1500	S. Merllyn, l, Flint* (£2 shrs)	1 10 0	2⅛	2⅞ 3⅛
2048	South Redmoor, c, Call.	1 0 0	1¼	
5000	South St. Just, t	2 0 0	—	
3000	South Ward, l, Beerferris	0 15 0	—	
236	Spearne Consols, t, St. Just.	6 4 4	—	
7000	Stiperstones, l, Salop*	7 0 0	—	
6000	Tamar Valley, s-l, Beeralston	1 5 0	—	
4000	Teign Valley, l, bar., Bridford	1 0 0	—	
25000	Terras Tin Mine, St. Austell*	1 0 0	1⅛	3 3¼
3500	Tin Hill, t, St. Austell	1 12 0	—	
6000	Tin Valley, St. Neot	1 3 6	—	
548	Trelyon Consols, t, St. Ives	17 5 0	2	1¾ 2
459	Tresavean and Trethurrup	22 11 0	—	
2048	Trevarrack, t, c, Uny Lelant.	2 0 0	3	2½ 3
10000	Treveddoe, t, c, Warleggan	1 10 0	—	
4096	Trewetha, s-l, Menheniot	11 14 6	—	
70	Tygwyn, l, Cardiganshire	25 0 0	—	
1000	Vaughan, s-l, Cardigan	2 0 0	—	
15000	Virtuous Lady, c, Tavistock*	1 0 0	—	
25000	Vron United, s-l, Cardigan	1 0 0	—	
1000	West Cwm Erfin, s-l	0 10 0	—	
256	West Damsel, c, Gwennap	40 10 0	—	
12800	W. Drake Walls, c, Calstock	0 11 0	¼	⅛ ¼
6000	West Esgair Lle, l, Cardig.*	2 0 0	—	2¼ 2½
5000	W. Godolphin, t, c, Breage‡	0 13 6	—	
2582	West Great Work, t, Breage	6 11 0	—	
10000	West Jewell, t, Gwennap*	2 0 0	3½	3¼ 3⅛
16	W. Margaret, t, Uny Lelant.	65 0 0	—	
100	West Nant-y-Cria, l, Cardig.	10 0 0	—	
12800	West Prince of Wales, c	0 17 0	—	
12000	West Rhoswyddol, l, Mont.*	1 0 0	—	
838	West Rose Down, c, Linking.	26 10 0	—	
3535	West St. Ives, t, c, St. Ives	0 10 0	½	⅜ ½
12000	West Stiperstones, l, Salop*	1 0 0	—	
512	West Tolgus, c, Redruth	66 0 0	—	
5000	West Wh. Kitty, t, St. Agnes	3 14 0	¼	⅜ ¼
3584	W. Wh. Tremayne, St. Erth	1 7 0	¾	⅝ ¾
741	Wheal Basset and Grylls, t	8 18 6	—	
5609	Wh. Courtenay, c, Tavistock	1 0 6	—	
811	Wh. Emily Henrietta, c, Illo.	24 0 0	6	5 6
6000	Wheal Franco Consols, t, c	0 4 0	—	
6000	Wheal Ida, s-l, St. Ive	1 14 6	—	
4568	Wheal Sparnon, c, Redruth	4 0 0	—	
1920	Wh. Trannack, c, Sithney	13 3 3	—	
6240	Wh. Trelawny, s-l, Liskeard†	2 13 6	—	
400	Wye, l, Llanidloes*	20 0 0	—	

b, blende; *cl*, coal; *c* copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc.

*** Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

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